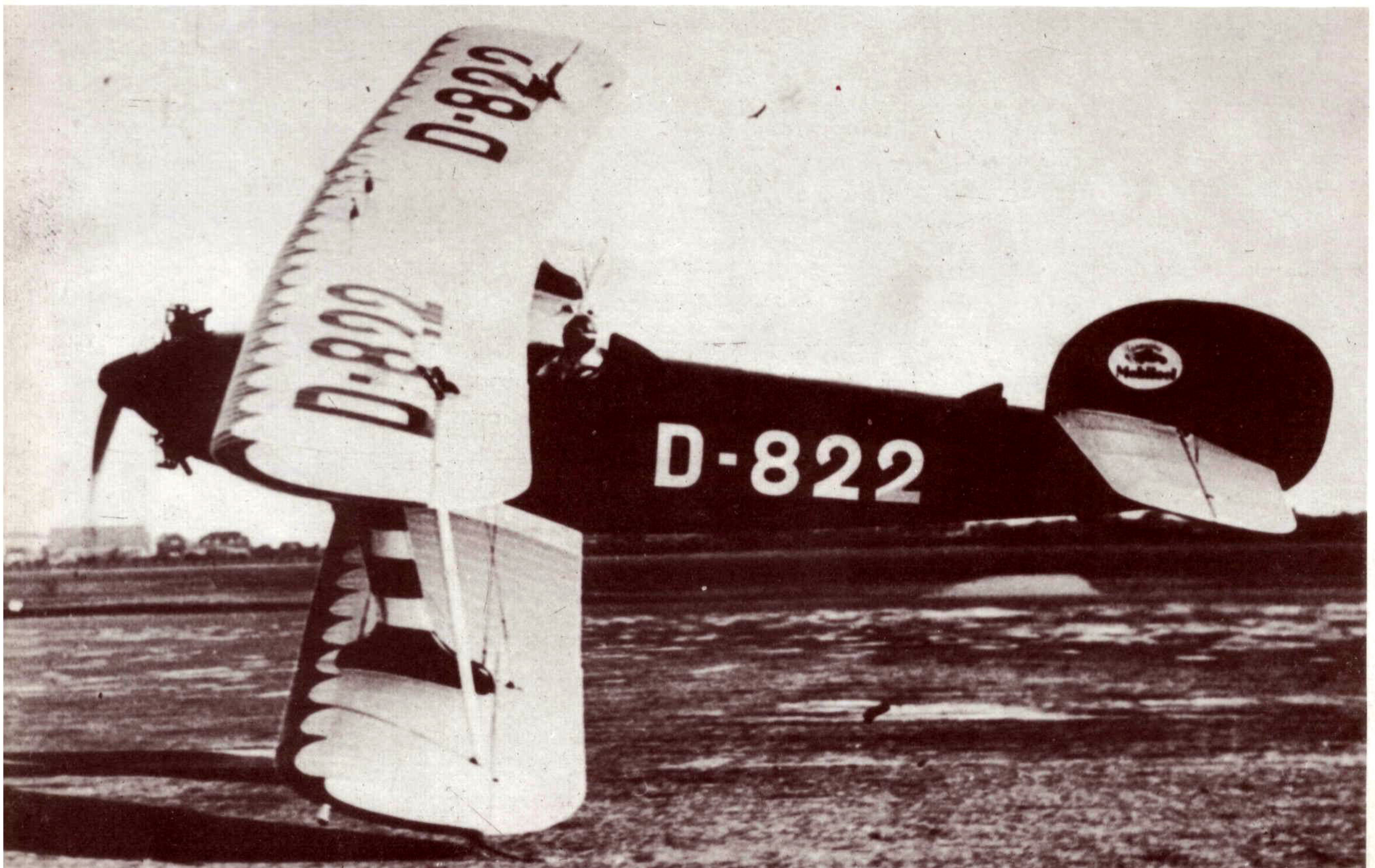


PROFILE Aircraft



Udet (BFW) U-12 Flamingo variants by Armand van Ishoven





Udet (BFW) U-12 Flamingo variants

by Armand van Ishoven

'Ernst Udet flies . . . these words electrify the whole town (Regensburg, Bavaria) . . . symbol of old fighting Germany' . . . Udet is already at the race-track, his nice biplane standing ready.

'After a few elegant bounds it soars into its element . . . it is handled masterfully . . . toy balloons are exploded with his glittering propeller . . . he spins . . . he climbs again and performs daring loops.

'At around 4 p.m., Ernst Udet lands at last, to an ovation which breaks loose from one end of the race-track to the other.'

Regensburger Anzeiger, April 12, 1925

This first public appearance of the U-12 Flamingo was attended not without drama behind-the-scenes. Ernst Udet had landed ashen-faced and in pain from a recently inflicted wound he had so far managed to conceal from everyone but his doctor. Brilliant flying was just one of his several enthusiastic pursuits. Only three days before the Regensburg air display, Udet had been struck deeply an inch below the heart with a nailfile wielded by a jealous ladyfriend.

Udet—1921 Aircraft Builder

In less than three years following the November 1918 Armistice, Udet was to lend his name (and devote his boundless energies) to aircraft manufacture. And all because of the bright

¹With 62 victories, Oberleutnant E. Udet ranked second to the deceased Manfred von Richthofen (Red) on the German "ace of aces" list.

ideas of one, William Pohl of Milwaukee, Wisconsin, on America's Great Lakes. In 1921, Pohl had decided that what Germany needed was a cheap lightplane available to the masses. He even toyed with such names as the "Everybody" and "Aero-body". But Pohl was realistic enough to see merit in the commercial acceptability in post-war Germany of exploiting the name of the nation's highest-ranking, surviving, "fighter-ace".

Pohl's American acumen paid off; Ernst Udet eagerly accepted the proposition which led to the launching of Udet-Flugzeugbau in 1921. The 25-year old "ace" lived for flying but in post-war Germany there were few opportunities even for brilliant pilots like Udet to scrape so much as a bare living out of aviation.

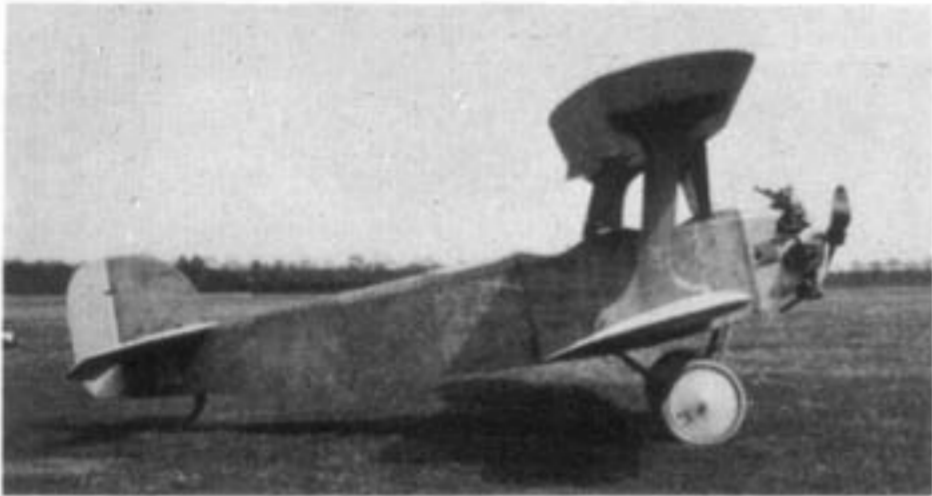
A start was made by renting a workshop at Milbertshofen, near the Bavarian state capital of München (Munich). But in July 1921, Udet-Flugzeugbau was forced to go "underground" before members of the IMKK (Inter-Allied Military Control Commission) could step in and apply the "notoriously restrictive aviation clauses" of the Treaty of Versailles. Together with the vital jigs and tools, the half-completed prototype Udet U-1—the Udet-Sport-Tiefdecker or low-wing sportsplane—was hastily loaded into a horse-drawn wagon and spirited away in the depth of night.

Subsequently the U-1 prototype (40/30 h.p. Haacke 2-cylinder engine) was completed at Ramersdorf behind the "cover" of perfectly

One can almost hear the clatter of the Siemens & Halske radial! A DVS-operated Flamingo, D-1202 was used at Schleißheim, near Munich, for training pilots of the Reichswehr and the future Luftwaffe. General Adolf Galland gained flying experience in Udet (BFW) U-12s. A 5-view colour representation of a similar DVS-operated Flamingo appears elsewhere in this Profile. (Photo: Messerschmitt AG)



Udet U-12 prototype at Munich-Schleissheim, April 1925. The original small-area rudder and short-nose fuselage are apparent. (Photos: Udet Flugzeugbau GmbH, via Peter M. Bowers and Author's archives)



With Author's reservations, D-563 is believed to have been the prototype U-12, seen here with the bigger-area (elongated) rudder. The experimental container under the fuselage was used in supplies-dropping tests. (Photo: via Deutsches Museum)

legitimate production of beehives and chicken-coops being turned out by Udet's friend and subsequent aviation colleague, Dipl. Ing. Erich Scheuermann, a pilot since 1911.

Fortuitously, the total ban on aircraft construction was partially lifted on May 5, 1922. And, just under two weeks later, the U-1 single-seater was towed behind an automobile through the streets of Munich on route to the commercial airfield at Oberwiesenfeld. Ernst Udet undertook the first flight there on May 16. Six months later, on October 23, 1922, the small company was officially incorporated as Udet-Flugzeugbau GmbH—(GmbH—Co. Ltd.)

Only one U-1 was built but this was followed in rapid succession by a two-seat development (U-2) and a more powerful version (U-4); then a cabin monoplane (U-5) and another open two-seater (U-6), an ultralight braced parasol monoplane single-seater (U-7 Kolibri), and the company's first small airliner (U-8), a cantilever parasol monoplane four-seater, which was the first German aircraft to be equipped with British-developed Handley Page-Lachmann wing slats (U-8b)—the ultimately famous "Handley Page slots". The last Udet designs included the final low-wing two-seater (U-10) and the ambitious four-motor, 11-seat transport high-wing monoplane (U-11 Kondor) which was one of the first German thoughts for the dual-purpose aircraft—deliberately doubling up as a bomber.

Two designs which never developed beyond the project stage were an amphibian and a high-wing fighter. However, before the end of 1925, both Ernst Udet and his friend Erich Scheuermann were to part company with William Pohl and Udet-Flugzeugbau GmbH because of disagreements at management level.

The Flamingo is born

Despite Pohl's bright ideas, the moderately-priced, low-wing training and sports monoplanes met with only moderate success. Twelve were built; six U-6s between July 1923 and May 1924 and six of its successor, the U-10, up to the end of 1924.

The majority of flying instructors in Germany were former war pilots with a preference for the biplane over the monoplane and the Udet-Flugzeugbau management decided to cater accordingly. Udet discussed the requirements of a training biplane with the designer, Dipl. Ing. Hans H. Herrmann and agreed on a name for this twelfth Udet design—the Flamingo. By the winter of 1924, the first blueprints were available and construction of an 85/77 h.p. Siemens & Halske Sh 5-powered prototype was started in early 1925.

Flamingo design details

Basically, the U-12 was a two-seat, single-bay, staggered and equal-span biplane braced with stranded steel cables. The entire airframe was of wooden construction with the exception of the Duralumin sheet-covered section incorporating the steel-tube engine mount. This forward section was designed to crumple on impact and thus take much of the shock of a crash-landing. Also in the interests of safety, the main fuel tank was not carried in the fuselage but built into the upper mainplane centre-section. The all-wood wings were fabric-covered. The centre-section struts were of inverted-U formation and, like the characteristic I-type built-up interplane struts, they were fabricated from Duralumin. The main undercarriage was of the simple cross-axle Vee-type with rubber cord shock absorbers. The U-12 was designed for dual

controls but one set of these could be easily disconnected as required from either front or rear cockpit.

Initially, no fewer than six variants¹ of the U-12 Flamingo were planned:

U-12a—A basic training model to be powered by a Siemens & Halske Sh 11 of 96/84 h.p. The low wing loading factor of 29 kg/sq. m. (5.94 lb/sq. ft) would keep the landing speed down to 50 km/h (31 mph).

U-12b—By employing another aerofoil section, the U-12b would offer better performance in cruise and climb conditions while retaining relatively low landing speed. Intended as an aerobatic trainer.

U-12c—Same power unit as U-12a/b models, but with reduced wing area resulting in slightly higher cruising and landing speeds. Intended as an advanced trainer.

U-12d—To be offered as a sportsplane using the same wings as the U-12b but as the first model to have the more powerful 125/108 h.p. Sh 12 radial engine. Top speed of 190 km/h (118 mph).

U-12e—The "Ne plus ultra" or "finest model" was to combine the smaller-area wings of the U-12c with the Sh 12 radial of the U-12d.

U-12w—The "Wasser" (water) seaplane model fitted with twin floats and the Sh 12 radial of the U-12d/e variants.

Udet-constructed Flamingos at the Ramersdorf factory were generally known as U-12s whether, like the prototype, they were powered by the 85/77 h.p. Siemens & Halske Sh 5 or the 96/84 h.p. Sh 11, both 7-cylinder radials.

Flamingo prototype—Even before the Flamingo prototype had been completed, one of Udet's friends, Walter Angermund (an airline director, Junkers-Luftverkehr) was busy with arrangements for a number of air display meets which would feature Ernst Udet and the new Flamingo. The public debut was planned for Easter Sunday, April 12, 1925, at Regensburg, about 130 km (90 miles) n.n.e. of Munich-Schleissheim airfield from where Udet flew the prototype U-12 for the first time only five days before the scheduled air display.

Udet's reaction to the Flamingo on this first experimental flight was to subject it to a series of rolls, wing-overs and a spinning sequence;



rounding all this off with the engine cut for a "dead-stick" landing. Without informing anyone where he was going, Udet unexpectedly departed for a few days of leisure time at the Bavarian alpine resort of Garmisch-Partenkirchen, 80 km (50 miles) s.s.w. of Munich.

Test-flying did not come to a standstill because Udet handed the Flamingo over to his friend Richard I. Kern. The latter was eventually the owner of a U-12b (Werknummer, or construction number, c/n 358; German civil registration D-1206, of February 1928).

Two days after the first flight, it was certain that the prototype Flamingo would be able to take part in the event at Regensburg three days hence. Angermund had begun to search frantically for Udet. He must have been considerably relieved to read a telephone message saying that Udet (the star performer) would be available for the Easter Day event. But, he might have been less easy in his mind had he known the real truth behind the message left for him at his hotel in his absence. What Udet could not yet reveal, even to Angermund, was the very recent and near-fatal episode of the nail-file stabbing!

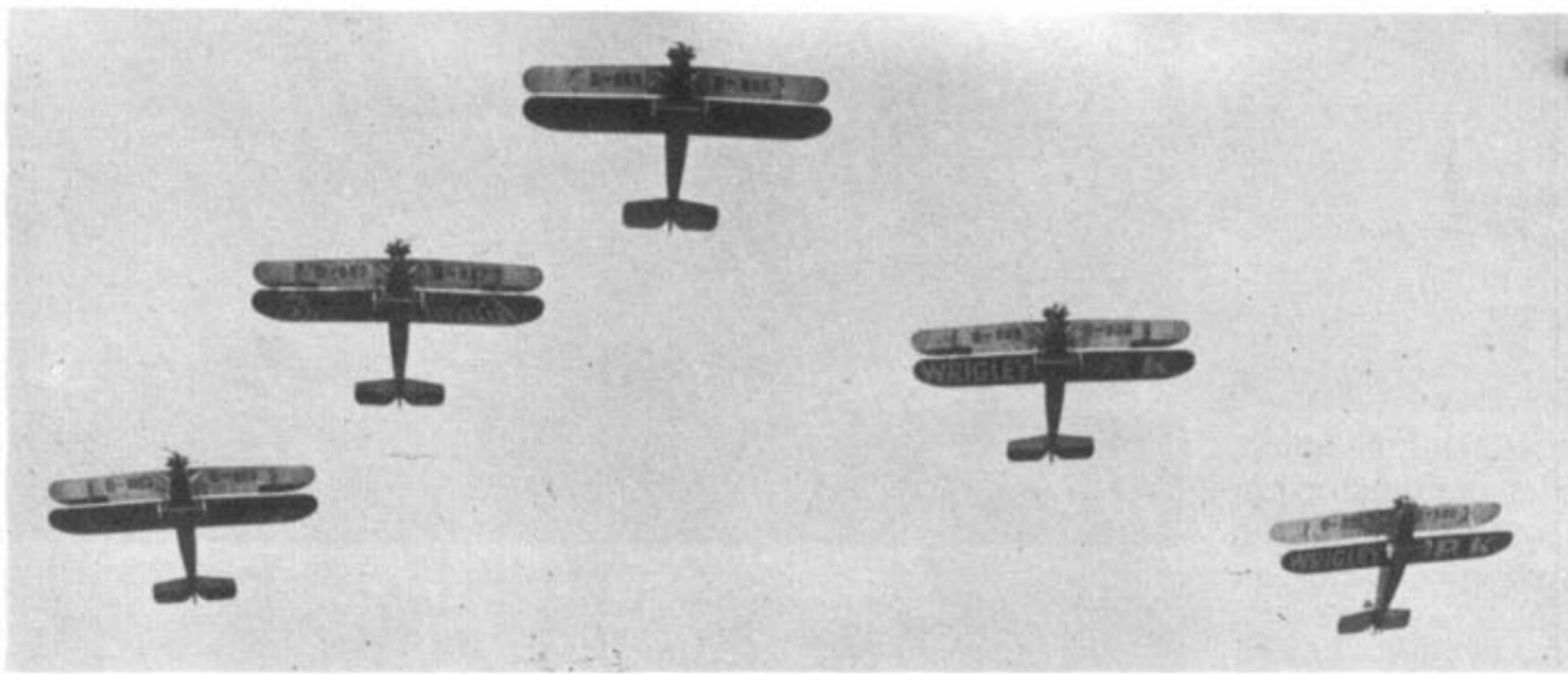
D-681 was one of the earliest production Ramersdorf-constructed U-12s; being flown here by Ernst Udet in the 1925 Deutscher Rundflug. (Photo: Dr von Langsdorff via Peter M. Bowers)

A cloth-capped Ernst Udet about to depart with luggage in D-773, another early U-12 which he often flew in 1925. Company's badge (a winged "U") appears on the forward fuselage and the company name is on the fin or vertical stabilizer. (Photo: via Ing. Fred Haubner)

¹See also BFW, Austrian, Hungarian and Latvian developments.



Widely-differing Udet design approaches lined-up on the airfield at Munich-Schleissheim in January 1926. Flanking the 11-seat transport prototype U-11 Kondor (D-828; powered by four pusher 125/108 h.p. Sh 12 radials), are the low-wing U-10 and its successor, the U-12 (D-363) biplane. (Photo: Archiv von Römer)



◀ An air display formation of five early-production Flamingos carrying the names of well-known consumer-product advertisers under the lower mainplanes. In consequence, the civil registrations appear on the undersurfaces of the upper mainplanes. (Photo: Archiv von Römer)

For Udet, Regensburg was a big success. Incidentally, he must have been blessed with a strong constitution because the very next day (Easter Monday) he was once again showing off the U-12. This time it was at Ingolstadt, some 70 km (43 miles) n.n.w. of Munich.

His friend Angermund now happily arranged more and more special exhibition displays which were watched by countless thousands of delighted spectators throughout Germany. Constantly, Udet added to and improved on his already spectacular repertoire. He incorporated such attractions as looping around a cable strung between two tethered balloons and then shooting down the balloons with a signal pistol.

Udet Flamingo in production—During the course of 1925, the first production Flamingos were completed. Udet flew, for example, both D-681 and D-773. He also flew D-563 (believed to be the prototype U-12 which was to be written-off in an accident at Munich-Schleissheim in early 1926).

Meanwhile, still in 1925, the Flamingo made its first competitive entrance (in June) in the second Air Circuit of Germany—the *Deutscher Rundflug*¹—which was centred on Berlin's main airport of Tempelhof. In this event, three U-12s (D-661, D-681 and D-682) were participants. Ironically, the Class B victor was another Udet product, a U-10 monoplane flown by Karl Hochmuth.

Towards the end of the year, on November 9, 1925, Udet took-off from Schleissheim for Rome's Centocelle and Montecelio airfields where Italy's top annual aerosport event—for the *Coppa d'Italia*—was to be held. For Udet, however, the handicapping system gave him a disappointing 5th placing.

At about this same time—and at the request of the U-12's designer, Herrmann—wind-tunnel tests were made at the DVL² research station, Berlin-Adlershof, with models of the U-6, U-7

and U-12. During November 1925, spinning tests had been made with the Flamingo as it had proved very difficult to get out of a spin. Two new rudder configurations were tried out. One was of greater chord than the original while the other was bigger overall. As a result of the tests, the elongated rudder succeeded the original one and the original elevators were also enlarged. Later, BFW decided that still more tail area was desirable and increased the rudder and elevators.

Flamingo sales—By the end of 1925, several U-12s had been sold. One of the earliest went to Paul W. Bäumer, World War One pilot and friend of Udet, who had started a flying school at Hamburg-Fuhlsbüttel and who, in 1924, had formed the Bäumer-Aero GmbH (together with another war pilot, Harry von Bülow) to sell Udet and Dietrich aircraft. Some examples of Bäumer's Flamingos include D-764 (c/n 247) and D-803 (c/n 255).

Other Flamingos, like D-787 (c/n 252), went to Sportflug GmbH. This organization operated some 10 flying schools where officers of the Reichswehrministerium (Ministry of Defence) could, in secret, keep their hand in at flying. (On April 1, 1927, Sportflug GmbH was more or less taken over by Luftfahrt GmbH which was later renamed Deutsche Luftfahrt GmbH.)

At displays—Flamingos now became a familiar sight at many air displays all over Germany for, besides Udet, many other pilots flew the new type.

The *Süddeutscher Rundflug*, June 1926, saw the participation of D-884, D-764, D-886 and D-829; the last-mentioned having been bought by the "Zirkus Krone" for publicity purposes.

Alexander von Bismarck, a test-pilot with Udet-Flugzeugbau (and a relative of Bismarck the Statesman), used a Flamingo to drop woollen "bombs" on a speeding motorboat during the *Starnberger Seefest*—the festival on Lake Starnberg, a few miles s.w. of Munich.

▶ D-1041, an early-production BFW U-12a, shows off the revised longer nose and bigger-area vertical tail surfaces. Inscription on the rudder is the abbreviated address: "Bayer. Flugzeugwerke A.-G., Augsburg. Tel: 3923-24. Telegr. Bayernflug." (Photo: BFW ref. 1256 via Messerschmitt archives)

▶ BFW's subsequently famous "eagle" trade mark appears on the nose of this ski-equipped U-12A. In the background is part of the BFW-Augsburg plant. (Photo: BFW via Oskar Rumler)

¹The first "Rundflug" (subsequently and today, the *Deutschlandflug*), Berlin-Johannisthal, June 11 to July 7, 1911, was won by a pusher biplane LVG (pilot: Benno König; observer: Leutnant Koch) covering a distance of 1,883 km (1,170 miles).

²DVL—Deutsche Versuchsanstalt für Luftfahrt eV, or German Aeronautical Research Establishment.



Other pilots displaying Flamingos were Bäumer and von Bülow, Fraulein Thea Rasche, and Walz and Kurt Wüsthoff. Flamingos also appeared in various competitions. For example, Sönnig flew a U-12 to third place in the 1926 Coppa d'Italia.

A Flamingo was also used to drop supplies, with and without parachute, to snow-bound places in the Ötztaler and Stubai Alps, by Franz Hailer who had been the first to land on the Zugspitze, March 19, 1922.

The Flamingo was even proposed as an airliner, taking two passengers in the rear cockpit; and also as one of the earliest crop-dusters.

However, neither the many plans made for the Flamingo by Udet-Flugzeugbau, nor its growing acceptance as an ideal schooling aircraft could save the enterprise from financial disaster. Employment had risen steadily so that, by the end of 1925, the Company—with 180 employees—was one of the biggest German aircraft constructors. But the wide diversification, namely the development of several types (which had not been built in sufficient quantities for economic returns) had eaten up large amounts of money. The Munich banking house of Merck, Finck and Co alone had invested some 800,000 Marks for which no dividends could be paid, and negotiations with the Reichsverkehrsministerium (Ministry of Transport) and the Bavarian State led to the establishment of a new firm to take over control.

BFW Flamingo—In this way, BFW, the Bayerische Flugzeugwerke AG was incorporated on July 30, 1926 at Augsburg. From Ramersdorf, most of the existing personnel and all the equipment were moved to the old Rumpler works at Augsburg where, at the end of 1926 production of the Flamingo was resumed—now becoming BFW U-12 Flamingo.

In the fall (autumn) of the following year, BFW merged with Messerschmitt-Flugzeugbau



▲ Superbly scenic backdrop! A trio of BFW Flamingos attend a flying contest with the Bavarian army in the background. (Photo: via Willy Radinger)



◀ D-1067 at Brunswick in 1931. Although advertising the name of an oil-products company, this BFW U-12a was normally employed in training student pilots of "Alaflieg" Braunschweig. (Photo: via Stadtarchiv Braunschweig)



A "kopfland" or nose-over in the snow temporarily embarrassed this ski-fitted U-12a (D-953). Only the wooden propeller and the main undercarriage appear to have sustained any damage. (Photo: via Willy Radinger)



More spectacular was this forced landing through lack of fuel of a U-12a (D-1582) engaged in political election propaganda over Berlin in March 1933. The Flamingo hit a crane at Nordhafen, in Berlin-Moabit, yet the pilot emerged virtually unscathed. (Photo: Bundesarchiv ABC ref. 14376)

GmbH of Bamberg. BFW continued the Udet-Flugzeugbau Werknummer (c/n or construction number) sequence and offered the Flamingo in two versions: U-12a, powered by a 7-cylinder radial Siemens & Halske Sh 11 giving 96/84 h.p. or U-12b, with the 9-cylinder Sh 12 of 125/108 h.p.

Nearly all Flamingos built by BFW were U-12as but, between 1929 and 1934, many were re-engined with either an Sh 12 or a 7-cylinder Sh 14 giving 115/95 h.p. to become U-12bs. They all had the enlarged-area fin and rudder, and also elevators.

DVS-operated Flamingos—Initially few Flamingos were sold by BFW to German private-owners but large orders were now forthcoming from the DVS or Deutsche Verkehrsfliegerschule GmbH, the German Transport Pilots' School. This DVS school had been formed at Berlin-Staaken on April 1, 1925, not only to train pilots for the fast-growing German airlines, but also—and secretly—for the Reichswehr (Armed Forces). Later, a branch was opened at Warnemünde to train marine pilots. In 1927, another DVS school was operated at Schleissheim where primary and aerobatic training took place. In 1929 the DVS-Staaken was transferred to Braunschweig.

Two types of pilots were trained by DVS in secret: Jungmärker, or officer candidates who had not yet entered the army; and, Altmärker, or active Reichswehr officers who had already learned to fly.

Already a very active airfield, Munich-Schleissheim, now became a veritable "Flamingo beehive". During the first one-year period, from July 1, 1927 to June 30, 1928, the DVS Flamingos, now 39 in number, made no fewer than 26,215 take-offs, resulting in 7,343 hours flown; approximating to a distance flown of almost 300,000 kilometres or 186,400 miles.

Needless to say, this considerable activity also produced a correspondingly large number of accidents. Each incident was registered and the wreck or damaged part duly photographed by the Flugwache, or Air Police, which, in turn,

had three Flamingos at its disposal; one example being D-1329.

For a short period towards the end of 1927, six DVS-operated Flamingos were "impressed" to act in the roles of British Royal Air Force scouts in a movie about the life of the famed Manfred von Richthofen. The German film company's technical counsellor, Richard Dietrich, also chose eight Dietrich DP IIa (Siemens & Halske Sh 5 or Sh 11) biplanes to play the opposing Fokker D VII's. The filming of the air scenes—with the U-12as sporting oversize red, white and blue RAF roundels—had only just commenced at the airfield at Bork-in-der-Mark (now in the DDR), when the company went into liquidation. The Flamingos were "demobilized" and returned to their former civilian markings and to DVS.

The DVS Flamingos were also to be seen at many air displays and other festivities all over Germany, but, logically, more especially in Bavaria. Sometimes a complete Jungfliegerstaffel (Flying Cadets' Staffel) of nine U-12s would be involved, such as at the Breslau air display on May 8, 1927.

Another sort of U-12 participation occurred on April 21, 1928, when a DVS Flamingo dropped flowers above the Munich Kriegerdenkmal (war memorial) to mark the 10th anniversary of Richthofen's death. A less sombre public event for DVS U-12s took place some three months later during the festivities arranged for the opening of the new airfield at Bad Tölz, s. of Munich, on July 8, 1928.

As the DVS expanded, other aircraft types were taken into service. But the Flamingos were worked hard and accidents occurred. One of the accidents that made the headlines happened over Munich-Schleissheim in June 1932 when a DVS Flamingo (D-1296) collided head-on with a Junkers Ju 52/3m (D-2201) of DLH—Deutsche Luft Hansa AG. (German Airlines) flown by Flugkapitän Polte and co-pilot Achterberg. The Ju 52/3m tri-motor transport was bringing back from the meeting at Dübendorf none other than Erhard Milch, then a



Flamingos galore at Munich-Schleissheim. These are some of the school U-12s operated by DVS and identified by the blue and yellow tail stripes. (Photo: via Author's archives)

DLH director and subsequent General Feldmarschall of the Luftwaffe. Polte effected an emergency landing in a field but the Flamingo's pilot was killed.

Pilots for the Reichswehr were trained at the DVS at Schleissheim while observers and airline pilots were mostly trained at the DVS-Braunschweig. Chief flying instructor at the DVS-Schleissheim was Willy Stör who now and then still made special demonstration flights on behalf of BFW.

Many names famous in German aviation can be found among the pilots who were trained on the DVS Flamingos between 1927 and 1935. Now, some 40 years later, Generalleutnant Adolf Galland fondly recalls the DVS Flamingos. He says that the pilot sat rather high and very much exposed to the elements. At all times while flying, the pupils had to wear a crash helmet which they called the "Trudelbecher" (literally "spin-bowl"). However, when flying solo, the students usually discarded their helmets as soon as they were out of sight of the airfield. He also recalled that the Flamingo was rather weak and that the Flamingo had to be landed at just the right airspeed.

Oskar Rumler, a former DVS-Schleissheim mechanic and later Willy Stör's own mechanic, confirmed that the first thing the ground crewmen at Schleissheim did each time a U-12 returned from a flight was to see if the undercarriage had been "bent".

Yet another pilot, Pit van Husen, who had already learned to fly in gliders, has recalled that it was not too difficult to hold a Flamingo on an even keel because "it had so many bolts, rivets and edges which could be lined-up against the horizon."

Severa GmbH U-12s—Meanwhile, the German Navy was secretly training pilots not only at the DVS-Warnemünde but also at the Norderney and Holtenau airfields operated by Severa GmbH—a commercial firm used to disguise the fact of German naval air service training.

At these naval stations Flamingos were used



▲ A delightful aircraft to fly. D-1116, a DVS-Schleissheim U-12a cavorts over a local timber yard railroad. (Photo: via Willy Radinger)



▲ Hand-operated refuelling for Flamingo D-1055 which was subsequently written-off in September 1928. The DVS students, probably future leaders of the Luftwaffe, wear the standard paramilitary style of plus-fours or knickerbockers. (Photo: via Willy Radinger)

and also took part in several air displays such as on June 9, 1929 when D-1401 and D-1582 flew at Kiel and on August 18 of the same year when D-1493 and D-1494 flew at Wilhelmshaven. During the severe winter in February and March 1929, some 20 vessels were caught in the ice in the Kieler Forde (Kiel estuary) and aircraft were used to supply them. Severa GmbH Flamingos, mounted on skis, took part in this exercise.



Although posed, this photograph gives a good indication of the pilot's view from the rear cockpit. The DVS ownership is proclaimed on the fixed vertical tail surface and reads: "D.V.S., Schleissheim. Tel: München 34893." (Photo: via EWR-Süd München Bildstelle)

A constant temptation for local Flamingo pilots was the 40-metre (130-foot) high bridge over the Kiel Canal at Holtenau. In spite of the ever-watchful police, many a Flamingo sneaked under this bridge. The neatest effort was that of a formation of three Flamingos which flew underneath, the pilots being Hubricht, Lilienfeld and the redoubtable Theo Osterkamp who was in charge of all Severa GmbH flying activities. Osterkamp's escapade of a few days later cost him a fine of 30 Marks—for looping around the bridge.

Other Flamingo users

Two German airlines purchased a number of Flamingos; DLH, Deutsche Luft Hansa AG of Berlin had 10 and the Munich-based Süddeutsche Luft Hansa AG possessed another four. However, DVS was the biggest operator of Flamingos, with no fewer than 60 at one time or another.

When, in the early 1930s, more modern instructional aircraft became available, many of the DVS Flamingos were reallocated to other organizations catering for flying training. Some, like Flamingos D-1275 and D-1321, went to the Würzburg branch of Sportflug GmbH. Others went to various Students' Flying Clubs (Akaflieg, or Akademische Fliegergruppen) such as Braunschweig (D-1067) and Berlin-Charlottenburg (D-1582). Flamingos were also available for "Stormy Petrel" or "Stormbird", the Working Men's Flying Association ("Sturmvogel", Flugverband der Werktätigen eV, founded 1928), including D-1278, D-1428, D-1461 and D-1512.

On the other hand, Flamingos seldom entered private-ownership in Germany although examples include: D-1277 (c/n 343), the property of O. Zimmermann of Plauen, D-1291 (c/n 349; formerly owned by DLH, Berlin) to Berlin-domiciled L. Gagelmann and D-1206 (c/n 358; formerly owned by Richard I. Kern) which was flown by a Düsseldorf dentist, Dr. med. dent. Kurt Schwickerath.

On March 1, 1935, when the hitherto secret Luftwaffe was publicly announced, DVS-Schleissheim became an Air Force Fighter Training School (Jagdfliegerschule) and its remaining Flamingos were phased-out. They were inherited by the "second" DLV¹—headed by Hauptmann aD (Captain, retired) Bruno Loerzer—since, from 1933 onwards, existing flying clubs had been dissolved by government decree.

The government aeronautical research establishment of DVL (and not to be confused with DLV!) at Berlin-Adlershof (DVL-Deutsche Versuchsanstalt für Luftfahrt eV) was also a

prodigious collector of aircraft including Flamingos such as D-1437, D-1493, D-1494 and D-1581. Another Berliner-by-acquisition was D-1577, operated by the famous instrument makers, Askania-Werke AG.

From the very beginning, BFW spent much money in fostering foreign orders both by flight demonstrations and exhibiting. One Flamingo was shown at ILA-Internationale Luftfahrt-Ausstellung—in Berlin during October 1928. This was the first post-war international aviation exhibition to be held in Germany. Earlier, in Paris, a model of the U-12 was to be seen at the Salon de l'Aéronautique from June 29 till July 15, 1928. Around that time, a BFW Flamingo cost about 24,000 Marks.

Several Flamingos carried publicity for commercial products on their wings and fuselage such as WEBER QUELLE (D-813), B. V. ARAL (D-1067), TRUMPF (D-1428), MIRAG (D-1323), WRIGLEY P.K. (D-905 and D-909).

A Flamingo, D-1041, was used at one time to try out a metal propeller. Another U-12a, D-1178 (c/n 322), was fitted with a semi-enclosed hood over the rear cockpit. On several occasions, Flamingos (including D-563, D-953, D-1513 and Udet's own D-822) were equipped with a ski undercarriage and at least one Flamingo was experimentally fitted with radio.

After a last batch of five Flamingos had been delivered to the DVS-Braunschweig in the autumn of 1929, the final Flamingo built by BFW was a U-12a, (c/n 441, D-1819, registered in April 1930) which went to the Akaflieg-München. Total production amounted to over 150 aircraft by BFW and some 30 more previously by Udet-Flugzeugbau.

New Registration System

From July 6, 1933 onwards, Flamingos—along with all other German civil-registered aircraft—had to bear the Nazi Party's flag on the port side (left-hand) of the vertical tail surfaces while retaining the national black-white-red flag on the starboard side. In September 1935, it was made obligatory to display a representation of the Hakenkreuzflagge (swastika flag) on both sides of the fin and rudder. Additionally, on March 30, 1934, a new Zulassungsverordnung, or Registration Order, altered the existing system from numerals (D-1 to D-9999) to letters. In respect of U-12s for example, D-1229 (c/n 334) owned by Thea Rasche was reregistered D-EKIP and D-1528 (a BFW U-12a, c/n 410; and originally allocated to DVS on the civil register of November 1928) became D-ELEF.

By the mid-1930s, many of the Flamingos had been written-off in accidents and those still remaining were being phased-out as Air Minister Göring's massive procurement programme began to result in increasing deliveries of new trainers². One relegated U-12 had a last dramatic

Key to colour side views

1 Udet U-12 prototype of April 1925; short nose and small tail surfaces.

2 BFW U-12a (c/n 322) with experimental fitment of metal canopy and blanked-off front cockpit; D-1178 was destroyed in the summer of 1931. Standard production longer nose and bigger tail surfaces.

3 Ernst Udet's aerobatic U-12a Spezial (c/n 269) as it was until March 1930 when further modifications were incorporated to U-12b standard. Detail showing a white flamingo was applied to left-hand side of fuselage only.

4 BFW U-12a (c/n 342) as demonstrated in Turkey by Willy Stör in 1928; D-1274 temporarily wears Turkey's crescent moon and star national markings.

5 Austrian U-12o prototype (D/N 444) first flew in 1935 and was developed by Major Hammerle.

¹When Hermann Göring became Reichskommissar für die Luftfahrt (National Commissioner for Aviation) on January 30, 1933, he introduced many drastic changes. By edict, the traditional aviation federation of independent flying clubs, the DLV (Deutscher Luftfahrt-Verband eV, founded 1902) was dissolved and replaced by the second DLV, Deutscher Luftsport-Verband eV (Air-Sports Union or Association) on March 25, 1933. Four years later, the second DLV was superseded by the Nazi Party's NSFK—EDITOR

²New trainers included the Arado Ar 66; Bücker Bü 131; Focke-Wulf FW 44; Gotha Go 145; and Heinkel He 72.



“fling” at the Perleberg (“A”/“B” Grades) Luftwaffe Fliegerschule. One day in 1936, it abandoned the passive role of wingless instructional airframe by breaking loose and, after speeding between two parked Dornier Do 23s, it eventually crashed into some trees beyond the airfield boundary.

On April 7, 1937, DLV, the Deutscher Luftsport-Verband eV (with over 50,000 members), was superseded by the Party’s NSFK, or National Sozialistischer Fliegerkorps (Nazi Air Corps), under General Friederich Christiansen. Some U-12s were absorbed by the NSFK and kept on flying until the early 1940s. One of the last survivors was D-EDEL which became a write-off in June 1941. In an over-tight turn, the U-12’s ailerons jammed and the Flamingo fell out of control from an altitude of 50 metres (160 feet). The pilot suffered severe injuries.

One of the last claims to fame for the Flamingo in Germany occurred in 1941 when it featured as a star performer in *Quax, der Bruchpilot* (“Quax”, the Hard-luck Pilot)¹, with the popular actor, Heinz Ruhmann, playing the part of Otto “Quax” Groschenbügel. Terra Filmkunst GmbH acquired an Austrian-built U-12o for static sequences and a Hungarian-built Flamingo for the flying scenes. The latter was given a fictitious registration, “D-EMMA” (the closest genuine letter grouping was D-EMOF); and, in keeping with the theme of the unlucky Bruchpilot, “Quax” was shown to crash into trees on the edge of a lake—on his first solo flight! The movie was premiered in Hamburg on December 16, 1941, and eventually grossed a remarkable 5.000.000 RM.

Flamingos: Towing and Testing

In Germany, the first glider-towing flights had been made in 1927 but it was not until the autumn of 1930 that experiments designed to make the innovation a practical proposition were undertaken by Peter Riedel² and Günther Groenhoff, both of Rhön-Rossitten-Gesellschaft eV (RRG), of Frankfurt-am-Main. The programme was instigated by the well-known Prof. Walter Georgii and the tests were carried out at Darmstadt-Griesheim using a U-12b (re-engined U-12a, D-1540). The aluminium-tube structure for the tow hook was heavy enough to affect the aircraft centre-of-gravity; making it necessary to push the control-column well forward during flight.

The first big success came in the spring of the following year when, on April 13, 1931, Riedel’s aero-tow helped Groenhoff to make a sailplane flight of 138 km (86 miles) from Darmstadt. By



Swastika tail markings in 1933. With a 3-seat Klemm VL 25 I a (D-1721) to the rear, D-1428 was the last Flamingo to take part in the annual Deutschlandflug (August 1933). The letters “MPF” are part of an advertising motif for the chocolate manufacturers, Trumpl. The airfield is Berlin-Staaken. (Photo: Bundesarchiv ABC ref. 14922)

Early morning dual instruction after the obligatory tail marking had been introduced in 1933. (Photo: via Author’s archives)

May 4, 1931, they were ready to perform at air displays; at Munich on that day, Groenhoff cast-off from the Flamingo when he found lift in the front of a thunderstorm. The epic flight ended at Kadaň (German spelling: Kaaden) in Czechoslovakia, shattering the existing world record with a distance of 272 km (169 miles).

By July 6, 1931, Riedel and Groenhoff were at Basel, in Switzerland, for the first demonstrations outside Germany. The two-day stay was extended in order to make a number of alpine flights at the request of the Swiss Aero Club’s Sektion Basel. A few months later, autumn 1931, Riedel conducted the first glider-towing course at Darmstadt-Griesheim; he, acting as chief flying instructor and aero-tow pilot.

During October 1931, several experimental aero-tows were made by the Braunschweig (Brunswick)-based Braunschweigisches Institut für Luftfahrtmesstechnik und Flugmeteorologie eV; a DVS Flamingo (D-1189) being used to aero-tow the Austrian-born sailplane pioneer, Robert Kronfeld, in one of his gliders.

The real breakthrough for the new method of towing gliders was its acceptance at the 1932 *Rhön-Segelflug-Wettbewerb*, the important sailplane competition held at the Rhön-Wasserkuppe site each year for two weeks. One of the two glider-tugs used (July 17–31) was the RRG Flamingo, D-1540. On July 22, D-1540 towed Kronfeld in his big-span glider—the 30-metre Austria—which, minutes after cast-off, dis-

¹The author saw this film in 1943 and again in 1972—EDITOR

²Peter Riedel (see *Flying the Flamingo* at end of this *Profile*) was the youngest entrant in the first (1920) annual Rhön-Segelflug-Wettbewerb. Then only 14 years of age, he competed with his own home-built biplane glider.

integrated while cloud-flying. At the same meeting, D-1540 tipped-over¹ at the end of the small Wasserkuppe airfield in an attempt to aero-tow the heavy, 3-seat, experimental glider called the OBS and designed by Dr. Alexander M. Lippisch (later responsible for the Messerschmitt Me 163 Komet—see Profile No. 225).

These were still the happy days when the novelty of aero-launching could be demonstrated at flying displays by glider pilots who had never previously experienced this form of becoming airborne. In fact, this happened to Pit van Husen who was asked by the famous glider pilot and sailplane designer, Dipl.Ing. Wolf Hirth, to stand-in for him at the 1932 Erfurt air meet, while the latter went to England. Thus, on the day, van Husen found himself in Hirth's STANAVO and about to be aero-towed by U-12 to 700 metres (2,300 feet) for the first time in his life. For aero-towing, the tow cable was fastened to the main undercarriage and released by the tow pilot simply by pulling out a retaining pin. At the appointed altitude, van Husen cast loose and entertained the thousands below with a display of motorless aerobatics. He was rewarded with the flattering remark: 'Wolf Hirth could not have done better!'

Despite the Flamingo's previous failure to aero-tow the heavy Lippisch OBS 3-seater, on June 5, 1932, a BFW U-12b created a first-time world record when Walter Böning accomplished a four-glider aero-tow at Halle-Leipzig airfield.

The Flamingo was also an engine flying test bed (in early 1930) for the air-cooled, 4-cylinder, inverted inline Argus As 8. The cooling characteristics of this excellent 135/115 h.p. engine had to be tested for 72 flying hours in order to obtain the Certificate of Airworthiness at the Air Ministry's aeronautical research establishment of DVL, Berlin-Adlershof. The DVL used Flamingo D-1437 to carry out some stability tests in 1931.

Udet's D-822: Star Performer

Udet's own U-12a (c/n 269; D-822), completed at the old Rammersdorf works in early 1926, was the "star" performer in every sense. Increasingly, at numerous air displays throughout Germany (and, later, Austria, Switzerland, England and the USA), people flocked to see the breath-taking performance of Udet in his dramatically all-red fuselage and silver-winged Flamingo. Considering the wide-ranging demands made of D-822—not least the several "movie-star" episodes—its lifespan of eight years (1926–34) is noteworthy.

One of Udet's more flamboyant tests for the Flamingo took place at the Mannheim air display of October 9, 1927. The display organizers arranged an "aerial duel" with Michel Detroyat, also possessing widely-acknowledged skill as a specialist in "la voltige aérienne," or aerobatics.

Flamingos were again in evidence at air shows in 1928 and Udet entered his Sh 11-powered



Dilemma für D-EMMA. Actor Heinz Rubmann as "Quax Groschenbudeger" poses in the staged remains of a Flamingo with the fictitious registration of D-EMMA at the end of his first solo flight. The highly successful film comedy was released in 1941 as "Quax, der Buchpilot". The "cockpit" to the rear of the actor is also pure fiction. (Photo: Terra Filmkunst GmbH)



D-1189, a DVS-operated Flamingo, shows off the aero-towing rig which was tested at Brunswick in October 1931 by Robert Kronfeld. Special equipment was installed to measure glider-towing drag. For these tests, D-1189 was re-engined with a 175/95 h.p. Sh 14, to BFW U-12b standard. (Photo: "Der Segelflieger")



U-12a Spezial (Special)² for the German aerobatics championships held at Düsseldorf on July 1. Gerhard Fieseler (now best known for his later Fi 156 Storch—see Profile No. 228) was declared the winner, beating Udet into 2nd place while the 3rd position was taken by Willy Stör (also in a Flamingo).

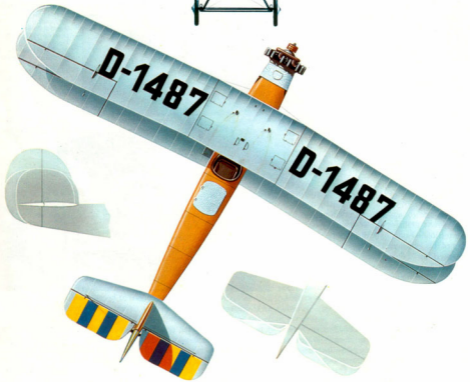
During the winter of 1928–29, Udet and D-822 were occupied with movie-making at the celebrated Swiss Alpine resort of St. Moritz. The film, regarded as a classic today, is *The White Hell of Piz Palù*. On March 3, 1929, Udet celebrated the completion of the cine exteriors of "Peak Palù" by performing his exhibition flying programme to a delighted audience of vacationers. This was a typical Udet flourish before putting D-822 into BFW-Augsburg for a complete overhaul.

Udet's Flamingo D-822 spent part of the summer of 1929 in a series of publicity flights over several German coastal resorts.

Famous pilot, famous Flamingo. Autographed photo of Ernst Udet alongside his Flamingo Special (D-822). In front of the lettering UDET is the inscription "Siemens-Motor" and the "S11" device of Siemens & Halske. (Photo: via Author's archives)

¹The U-12b, D-1540, was finally written off on July 15, 1933, when it spun into the ground at Darmstadt-Griesheim while engaged in aero-towing.

²In the collated German Civil Register of February 5, 1928, Udet's D-822 was listed in English as "U-12a (Special)"—(canon)





D.V.S.
Schleissheim
Teil München
34893



D-1487 was a BFW-built Udet U-12a Flamingo (W.Nr. 402) powered by an 80 h.p. Siemens Sh 11 and is depicted as it was up to May 3 1932, when a very heavy landing resulted in the fuselage breaking in two at Schleissheim, München (Munich); after rebuild and exchanging the Sh 11 for the more powerful Sh 12 radial, D-1487 was ready to fly again in April 1933. The tail markings identify DVS, the German Commercial Flying School or *Deutsche Verkehrsfliegerschule*, one of whose training establishments was at Schleissheim. The detail drawings indicate three variations in Flamingo tail assembly shapes and the alternative snow ski arrangement. The BFW trade mark of the eagle is probably more familiarly associated with Messerschmitt.



Early in 1930, D-822 was given a more powerful version of the Siemens & Halske series of 7-cylinder radials, the 115/95 h.p. Sh 14. This brought about a change of designation from U-12a Spezial to U-12b Spezial. During this particular workshop sojourn, improved, bench-type tabs above the ailerons were fitted. Later in the same year, D-822 was again used for filming; this time for the movie *Storms Over Mont Blanc*.

In the fall or autumn of 1931, Udet literally extended his horizons by accepting his first invitation to show his aerobatic "act" in America. But before this came about, Udet flew to England for the first time to perform in the display mounted on the occasion of the annual King's Cup Air Race; centred that year (July 25, 1931) on London's Heston Airport.

With his mechanic, Erich Baier, on August 18, 1931, Udet and D-822 were aboard the transatlantic Norddeutscher Lloyd's *Europa* bound for New York and, in September, the exciting National Air Races at Cleveland, Ohio. For the journey, D-822's fuselage was securely lashed down on the 2nd-class promenade deck while the wings were lodged in the strongroom. At Cleveland, his "crazy-flying" performances were warmly appreciated.

For the display season of 1932, D-822 was little used because until October, Udet was on yet another filming expedition where he flew his Klemm L 26 a V (c/n 378; D-2269) tandem-seat monoplane. Meanwhile, Flamingo D-822 went in for major overhaul, this time being executed by Gerhard-Fieseler-Werke GmbH of Kassel.

At one time or another, Udet owned half-a-dozen Klemm monoplanes and in 1933 he flew a Klemm L 25 c XI (c/n 416; D-2397) for most purposes, including filming. However, prior to taking his Flamingo to America for the second time, Udet's D-822 had a further engine change, in June 1933, with the installation of a 160/150 h.p. Sh 14a radial.

In July 1933, D-822 and Udet were back in the USA, to give further displays at the air races.

The next film for which D-822 was used had the title of *Das Wunder des Fliegens* (The Marvel of Flying) which is said to helped to make Germany even more air-minded.

For the 1934 flying display season, Udet still continued to use his familiar mount, D-822, but it was to be for the last time. Ultimately, and with something less than Udet's supreme airmanship (countless thousands had thrilled to his famous "stunt" of plucking a handkerchief from the ground on the end of a short pole attached to the lower wingtip of the Flamingo), a ferry pilot entrusted with D-822 at Innsbruck, Austria, attempted a return flight to Germany with a spectacular *Kavalierstart* (climbing take-off). Udet's faithful D-822 crashed and was a total write-off.

Turning back the years, Udet had used D-822

Ernst Udet in Flamingo D-822 temporarily fitted with the Udet-Schlegel-Schmitt gear developed between 1927-29 for towing advertising banners. The banner chute is fitted between the main undercarriage legs. (Photo: via Dr Walter Dollfus)



Another view of the same series showing the Schlegel-Schmitt banners which had to be packed as carefully as a parachute. (Photo: via Dr Walter Dollfus)



A different kind of packing and stowing. Udet and his D-822 aboard the Norddeutscher Lloyd "Europa" on August 20, 1931, outward-bound for New York (and then on to Cleveland, Ohio), for the September National Air Races. (Photo: Norddeutscher Lloyd, Bremen)



Udet in England, July 25, 1931. He was invited to give an exhibition of his aerobatic prowess at London's Heston Airport on the occasion of the annual King's Cup Race. Note the bench-type tabs above the ailerons for increased response in display flying. Man looking into cockpit is Udet's trusted mechanic, Erich Baier. (Photo: R. S. Allen)

during the period of 1927 to 1929 for developing a novel method of aero-towing publicity slogan banners called the Udet-Schlepp-Schrift. For this purpose, D-822 was fitted with a funnel in the front cockpit through which several banners (one below the other) were attached to a ballasted cable. The Udet Schlepp-Schrift did not, however, prove to be successful.

Besides displaying sponsorship names—publicity for Siemens & Halske and Mobilöel—D-822 carried the letters UDET on each side of the fuselage from early 1926 until March 1930. Then, the fuselage UDETs were replaced by SCINTILLA, (a Swiss-developed ignition system) and UDET was painted on the top wing. This scheme lasted until April 1932 when both these names were deleted.

Fraulein Rasche's two Flamingos

One of the people that learned to fly with Paul Bäumer at the end of 1924 was the headstrong Fraulein Thea Rasche, the daughter of a wealthy brewery owner from Essen. When Bäumer bought his first Udet Flamingo in 1925, Fraulein Rasche trained on it to become Germany's first woman aerobatics pilot.

From 1926 onwards, she participated in several flying meets, sometimes with other pilots of Bäumer-Aero. One day at an air display in Hamburg, Bäumer wanted to spin the Flamingo with two aboard and included her in the invitation. The "stunt" developed into a flat spin which Bäumer was unable to correct. Finally he raised both hands as if to say goodbye to Thea but, miraculously, the aircraft then righted itself . . . a few feet above the ground. The smaller rudder of the early model, Udet-built Flamingos, had nearly exacted a fatal toll.

Early in 1927, and with only half-an-hour to go to the wedding ceremony, the lady rejected her fiancé. As a consolation, her indulgent father handed over an impressive 50,000 Marks so that she could follow a career in aviation. Before long, Fraulein Rasche was at Augsburg taking delivery of a brand-new BFW Flamingo (D-1120; all-red fuselage like Udet's D-822!) and being briefed by Willy Stör.

Her role as a potential "Kunstfliegerin" or



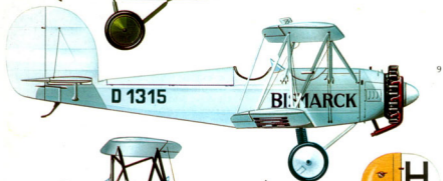
female "stunt pilot" was advanced when, in June 1927, she was told of the many opportunities awaiting her in the USA. The gentleman who proposed to be her manager (and was, typically, rejected) was none other than Charles A. Levine who had accompanied Clarence D. Chamberlin in a Bellanca W.B.2 called Miss Columbia (USA-registered NX-237) on a record non-stop flight from New York to a mere 100 miles short of Berlin (landing near Eisleben), June 4-6, 1927. This was only two weeks after Charles A. Lindbergh's epic flight to Paris.

Thea Rasche seemed to "collecting" Atlantic fliers because, on route to London from Berlin by way of Essen, in Paris she met the newly-arrived Commander (later Admiral) Richard E. Byrd, USN, of Polar fame. His flight to Paris from New York, June 29-July 1, 1927 (in the tri-motor Atlantic/Fokker C-2 America) had ended with a

D-1120, like Udet's D-822, had an all-red fuselage and was owned by an equally colourful character, Fraulein Thea Rasche. Here D-1120 is seen at Roosevelt Field, Long Island, NY, on July 22, 1927; the aviatrix gave a "stunt-flying" performance, the first since her arrival in the USA. (Photo: Underwood & Underwood)



Fraulein Thea Rasche's headstrong exploits earned her the popular name of "Rasche Thea". Here she is posing alongside her first Flamingo (D-1120) which was written-off in America in August 1931. Above the tail is the legend indicating empty and permissible loaded weights. (Photo: via Author's archives)



frustrating shoreline "ditching" at Ver-sur-Mer, n.w. of Caen.

From Paris to London, Flamingo D-1120 encountered very bad weather conditions. Shortly afterwards, Miss Rasche flew south again, this time to Southampton, where she enlisted the help of the inventor of the Autogiro, Spain's Juan de la Cierva, in getting her U-12 aboard the liner *Leviathan*. It was during this transatlantic crossing that she heard of the tragic death of Bäumer on July 15, 1927.

On arrival in the USA, Thea Rasche learned that she was not allowed to earn any money as she held a tourist-only visa. All she could do was to take part in contests in Providence and Worcester.

Whereas in Germany she had earned the nickname "*Die rasche Thea*"—Fast Thea—in America she was soon known as "Rash Thea".

While flying back to New York to attend her birthday party on August 12, 1927, she could not resist the temptation to fly under the bridge at Albany. Judiciously it might seem, right at that moment the U-12's engine "quit" (a fuel problem, not mechanical failure) and she was forced to land in the Hudson river.

She refused a subsequent offer of \$6,000.00 for the Flamingo's recovered remains and simply had the aircraft burned. As it had been fully insured she was soon in receipt of a new Flamingo; Siemens & Halske even sent three mechanics with a brand-new engine. The new aircraft, D-1229 (c/n 334) was flown in America without any registration marks. (A project to fly the Atlantic with a Bellanca came to nothing and she returned to Germany.)

Thea Rasche did not like her new Flamingo (which she unkindly dubbed "*Nebekehr*"—literally "Foggy Cow") and she sold it in 1928 to the DVS-Berlin for 16,000 Marks. The aircraft was re-engined in 1929 to become a U-12b and, during July and August of the same year, Dr. Pasewald and Dipl.Ling. von Berg used D-1229 to make the longest voyage ever made with a Flamingo. They left on July 1 for a demonstration tour on behalf of Siemens & Halske AG.

The Flamingo D-1229 (with an Sh 12 engine and 10% increased gross weight of 940 kg) was demonstrated at Vienna-Aspern, Graz-Thalerhof, Budapest, Belgrade, Bucharest, Gorno, Sofia, Thessaloniki, Athens, Brindisi, Naples, Rome, Pisa, Milan, St. Raphael, Marseilles and Barcelona; some 7,000 km (4,350 miles) flown in 60 hours during a period of six weeks. In November 1930, D-1229 went to the DVL and then in March 1932 to the DVS in Braunschweig (Brunswick). Finally, in April 1934, it went to the DLV as D-EKIP.

Fraulein Rasche was not the only aviatrix who flew the Flamingos regularly; others included Christelmarie Schultes, Lola Schröter and Nelly Tussmar. Like Lola, Nelly also made parachute jumps from Flamingos at air shows; and, on one occasion, she deliberately jumped

into Lake Constance. Fraulein Tussmar's 71st jump, at Chur in Switzerland, on June 16, 1929, ended fatally.

Flamingos in Austria

Examination of yellowed documents from Austria's State Archives, the Österreichisches Staatsarchiv, in Vienna, permits a reconstruction of the "life" of a BFW-built U-12a Flamingo, A-55 (c/n 403).

At the request of the Österreichische Luftverkehrs AG (ÖLAG), the first Austrian airline (founded on May 14, 1923) this Flamingo was given the civil registration A-55 on September 24, 1928. In January 1932, the Sh 11 engine was replaced by an Sh 14 and, four months later, A-55 overturned at Graz-Thalerhof airfield while being flown by Franz Behrendt. By August 14, the repaired ÖLAG Flamingo had regained its C. of A. following examination by Dipl.Ling. Erich Scheuermann¹. A year later, A-55 suffered yet another accident, this time at Salzburg, on July 25, 1933.

One may ask: What was this Flamingo doing in Austria? The answer lies in Paragraph 144 of the Peace Treaty of Saint-Germain, signed on September 10, 1919, which forbade all military flying activity in Austria. Even when, on October 27, 1927, a convention was signed between the Allies and Austria, it was clearly stipulated that all aviation activity was strictly forbidden to military personnel. The only concession made was that during the next six years, 12 members of the Bundesheer (Federal Army) were permitted to learn to fly at their own expense.

The Bundesheer, following Germany's clandestine initiative, began to create a nucleus of trained pilots. As soon as the Allied Military Control in Austria ended on January 31, 1928, Oberst (Colonel) Alexander Löhr of the Federal Ministry for Army Affairs (the Bundesministerium für Heereswesen—BMHfW), started developing the flying school at Graz-Thalerhof in cooperation with ÖLAG.

Ten BFW U-12a Flamingos were purchased from Germany by the BMHfW; the first deliveries being made in September 1928. They were put at the disposal of ÖLAG's flying school ostensibly to train airline pilots but also, in secret, for the military pilots.

From 1930 onwards the "Maturanten" (aspiring or candidate officers) had the opportunity of learning to fly at government expense before beginning their military careers. The first course took place in 1930–31 in absolute secrecy, using Flamingos as well as Austrian-designed Hopfner H.S. 829 biplanes for training. Six of the "civil" pilots became lieutenants when the Austrian Air Force—or, more accurately, the Federal Army Flying Corps (Die Fliegertruppe

Key to colour side views
6 BFW U-12a (c/n 410) in the colour scheme applicable to DVS at Munch-Schlessheim in 1934. Previous registration in old system was D-1528.

7 ÖLAG Flying School (imported BFW U-12a (Austrian civil registration A-713) in the interim colour scheme, Whitsun 1932.

8 Latvian-built U-12b as flown in 1930 when experimentally fitted with a Czechoslovakian Walter Mars radial of 145 h.p.

9 BFW 1 Spörber (Sparrowhawk; c/n 331), white overall and as flown at St. Moritz, Switzerland, in February 1929, by former Udet-Flugzeugbau test-pilot, Alexander von Bismark.

10 An early U-12 constructed by Udet in 1925–26 but depicted in 1929 configuration after conversion to Hungaria standard during overhaul at the Sósio Repair Workshop.

¹Up to 1931, all Austrian Flamingos were inspected by a representative of Germany's DVL, Prüfstelle (Aircraft Inspectorate) who was, in this case, Udet's former business partner, Dipl.Ling. Scheuermann.

des Bundesheeres)—was openly acknowledged. With one exception, all were killed on active service with the German Luftwaffe in World War Two.

During the next course, 1931–32, the pupils trained in uniform. Incidentally, five of these pupils helped to build the new Austrian Air Force (Österreichischen Luftstreitkräfte) in 1955.

The inhabitants of Graz and its surroundings soon became accustomed to seeing Flamingos performing the training routine of spins, rolls and loops.

The earliest ÖLAG Flying School Flamingos had clear-varnished fuselages with wings, wheels and engine cowlings finished in aluminium paint. Later examples (A-110 to A-120) were painted pale yellow overall. Those with civil registrations A-55, A-74, A-110 to A-120 and A-142 were painted in black on fuselage sides and wings while the rudder carried five vertical red and white stripes.

Eventually, all the Flamingos were painted dark green with aluminium silver wings; and the registrations were in white. The rudder carried three red-white-red horizontal stripes with the Dienstnummer, or Service serial number, painted in small figures in the centre of the white stripe. For example, A-55 was allocated the Service no. 41.

During Whitsun 1932, four U-12s (A-110, A-112-A-114) took part in the first of the Austrian "Pfingstflug" or Whitsuntide air meets. Then, on May 14, 1933, another Flamingo (A-74) aerotowed the "Schöckelfalken" glider, flown by Cand. Ing. Mühlbacher—and carrying 19 kg (42 lb) of mail from Graz 60 km s.s.e. to Maribor, in Yugoslavia; and then back again. This first international glider mail flight between Austria and Yugoslavia was organized by the Grazer Akaflieg, the students' flying club of Graz university.

A secret aircraft factory at Graz-Thalerhof—innocuously named the Fliegerwerft Thalerhof or "Aviation Repair, Thalerhof"—was established by the BMfHW to supplement the 10 imported Flamingos, and to provide facilities for training a nucleus of aircraft mechanics and other tradesmen.

From 1933 onwards, 20 Flamingos were licence-built in workshops and an assembly hall left over from World War One. Long-serving military personnel, assisted by civilians, undertook lathe-turning, welding and case-hardening tasks.

In February 1934, the pupils of the third ÖLAG course were enlisted as soldiers in the Bundesheer. Finally, on April 1 of that year, the ÖLAG Flying School and its Flamingos were taken over by the Bundesheer to become Lehrabteilung II or Training Section Two. While the 20 Flamingos were under construction at the Fliegerwerft, its manager, Major Hämmerle, designed an improved version, the U-12o¹, also called U-12S.



An Austrian-purchased BFW U-12a allocated to the ÖLAG Flying School and bearing the civil registration A-55. The dark green and final paint scheme adopted was applied during major overhaul. ÖLAG Flamingos operated from the airfield of Graz-Thalerhof. (Photo: Heeresgeschichtliches Museum, Vienna)

The Hämmerle U-12 redesign incorporated a fabric-covered, steel-tube fuselage, modified fin and rudder and an improved undercarriage with independently-sprung main wheels (and relatively small-diameter tyres). Powered by the 150 h.p. Sh 14a, it was some 60 kg (132 lb) heavier than the original U-12 but retained the same flight characteristics. For Service use, they were painted aluminium silver overall and sported black registration marks with red-and-white rudder insignia.

The prototype U-12o (Dienstnummer 444; OE-TEA) first flew in 1935 and evidence of Service serial numbers points to at least 10 production units having been built: OE-TOG (D/N 435), 'TEL (441), 'TAL (442), 'TUL (443), 'TIA (445), 'TOA (446), 'TUA (447), 'TBA (448), 'TCA (449) and 'TDA (450). Initially, OE-TOG had been allocated a registration starting with P (OE-POG) normally reserved for police aircraft.

Accidents were inevitable in training and several Flamingos had crashed in the meantime; A-110 and A-112 both victims on May 29, 1934, followed by A-119 on October 31, and so on. One of the most spectacular accidents to happen was on the morning of May 2, 1935, when a Flamingo of Graz-Thalerhof, A-111, collided with A-215, which was a Fiat-Ansaldo A.12o. Thus, by the summer of 1935, only 13 remained intact. When the Austrian Fliegertruppe came out into the open, 10 of these were taken over and were given a new type of registration in accordance with the fourth Luftverkehrsverordnung of July 7, 1935. This consisted of OE—followed by three letters: A-55 became OE-TAF and A-117 became OE-TAL, as two examples.

Flamingos were used for training by the

¹The suffix U-12o signifies Österreichische (Austrian) origin; while U-12S stands for Stahl (steel)—1011 OK

Another Austrian-imported U-12a (A-41) was based at Salzburg where it is seen here on skis. At the close of 1934, this Flamingo was sold back to Germany. (Photo: via Hanfried Schliephake)



Of-POG (later Of-TOG) is an example of the Austrian-developed, Hammerle-designed U-12a. Most noticeable are the relatively small-diameter main wheels, the divided-axle undercarriage and more rounded fuselage. (Photo: via Ing. Fred Haubner)

Austrian Fliegertruppe until the "Anschluss" of March 13, 1938, when they were taken over by the Luftwaffe and, eventually, broken-up.

Unconnected with the ÖLAG Flying School, there were three earlier Flamingos bearing Austrian civil marks: A-25 (ex-German D-135), A-41 and A-43. While still carrying its original registration D-135, A-25 was used to drop winter supplies in the Alps, operating from Innsbruck airfield. The second, A-41 (c/n 302) was used by the Österreichische Fliegerschule (Austrian Flying School) at Salzburg and at the end of 1934 was sold by Österreichische Luftbildindustrie (Austrian Aerial Survey Industry) back to Germany. No information is available on the third U-12 registered A-43.

Flamingos in Hungary

Hungary gained a troubled independence in 1918 and in 1920 all aviation activity was forbidden. Not until the autumn of 1922 was civil flying being allowed again.

However, already in January 1920, the Légügyi Hivatal or LÜH (Aviation Department) had come into being as part of the Ministry of Trade. It was, in reality, the hard core of the clandestine Hungarian Air Force.

The Magyar Királyi Repülőgépvezető Iskola (Hungarian Central Flying School) had been formed at Szombathely, near the Austrian border, initially to train pilots for MALERT, the national airline but later to instruct military pilots in secret.

Until 1925, all trainers were either of post-war Hungarian design or modernized versions of World War One types. In that year, an official decision was taken to evaluate foreign trainers with a view to eventual licence-construction.

A government purchasing commission eventually settled on a British aircraft, the Bristol Type 83 PTM or Primary Training Machine (140/120 h.p. Bristol Lucifer radial) and the Ramersdorf-built Udet U-12a. Both companies gained order for five trainers each. Although the demonstration in England had taken place for the commission in December 1925, the five Bristol PTMs were not delivered to Hungary until April of the following year.

Despite an initially more favourable reception accorded the British design¹, comparative trials

gave the Flamingo enough advantage for further orders to be recommended.

For Udet, the outcome of the trials was to be a personal triumph. Previously, when he had visited Szombathely, officials had pressed him to arrange for the strengthening of the U-12's airframe. Udet resolutely resisted all arguments. Following the Hungarian trials, the original order for five U-12s was increased to 12. Shortly afterwards, there came another order, this time for 12 of the more powerful U-12b Flamingos.

When the first Hungarian-ordered U-12a examples were ready, difficulties were experienced in locating pilots familiar with the route from Munich to Szombathely. Several Flamingos were delivered by Hans Baur², line pilot of the newly-incorporated (January 1926) Deutsche Luft Hansa AG. In a pre-ferry flight to get the "feel" of the Flamingo, Baur indulged in a series of lively aerobic manoeuvres until he realized that his passenger's agitation (Herr Stubenrauch, a BFW engineer) was because he was not strapped in.

The bulk of the export orders for U-12a and U-12b Flamingos was effected by BFW following the collapse of Udet-Flugzeugbau. Thus, it fell to Willy Stör, the new company's demonstration

¹Vassel, LüH's chief, had been concerned because some Hungarian-designed Otavecz trainers built to German structural norms had suffered wing failures.

²Hans Baur eventually became Hitler's personal pilot.



Hungarian Flamingo as a "lighter". Two nose-mounted, 8-mm machine-guns are clearly visible in this view of the locally-built Hungarian Variant V which was a basic lighter-trainer. (Photo: Aero Archiv Winkler-Budapest)



Aircraft of the secret Hungarian air force. Nearest row includes two variants of Hungárias and some Heinkel HD-22s. The second and third rows include Fokker CVs and Heinkel HD-22s. Each unit was given a cover name; for example: "Meteorological Air Agency of the Ministry of Commerce". (Photo: via Ferenc Kovács)

pilot, to introduce the Hungarian flying instructors to the Flamingo's spinning characteristics.

Following the cessation of the Inter-Allied armament control in 1927, the first big Hungarian armaments programme was launched. In order, among other things, not to have to pay any more licensing dues, the Central Repair Workshops of Székesfehérvár (LüH's secret aircraft factory), developed the Hungária—a modified version of the Flamingo, designed by Sándor Lóczy.

Production of the Hungária started in 1927; and, at the air display at Mátyásföld on May 15, 1928, about half-a-dozen Hungárias participated. During the period 1927–32, some 80 Hungárias were built in five different variants (I to V).

Four variants (I-III and V) were equipped with steel-tube N-struts instead of the normal aluminium I-struts (IV). They also had a sloped auxiliary strut fitted between the lower mainplane and the fuselage. The outline of the horizontal stabilizer or fin was altered and minor modifications were made in the wing structure and the undercarriage.

Variant V was available as a fighter-trainer and as a bomber-trainer; both having been developed because of the urgent need for such basic training facilities.

The Hungária "fighter" was equipped with two 8-mm Type 26/31 M Gebauer GKM synchronized machine-guns installed, and was flown as a single-seater.

The Hungária "bomber" carried 10- and 25-kg war-surplus bombs. Under the rear seat, a Barkász bomb-aiming device was installed above an opening covered by a celluloid transparency.

Most Hungárias were equipped with the Hungarian Manfred Weiss-built 125/108 h.p. Siemens & Halske Sh 12 engine driving a Sóstó Type 79 propeller. (A report that some Hungárias were powered by overhauled Mercedes water-cooled inline engines from World War One stocks has not been confirmed.)

NOTE: Specifications of the different Hungária variants appear at the end of this *Profile*.

Some of the earliest Udet-built U-12s, with the

small fin and rudder, were overhauled at Sóstó and transformed into Hungárias.

Meanwhile, at the instigation of the LüH, the Manfred Weiss concern, one of Hungary's largest industrial companies, had also started building airframes and aero-motors (Weiss Manfred Repülőgép és Motorgyár Részvénytársaság) at its Csepel plant, near Budapest. In 1928, the firm negotiated the licensing rights for the BFW U-12b; and, during the next two years, it built some 40 Flamingos.

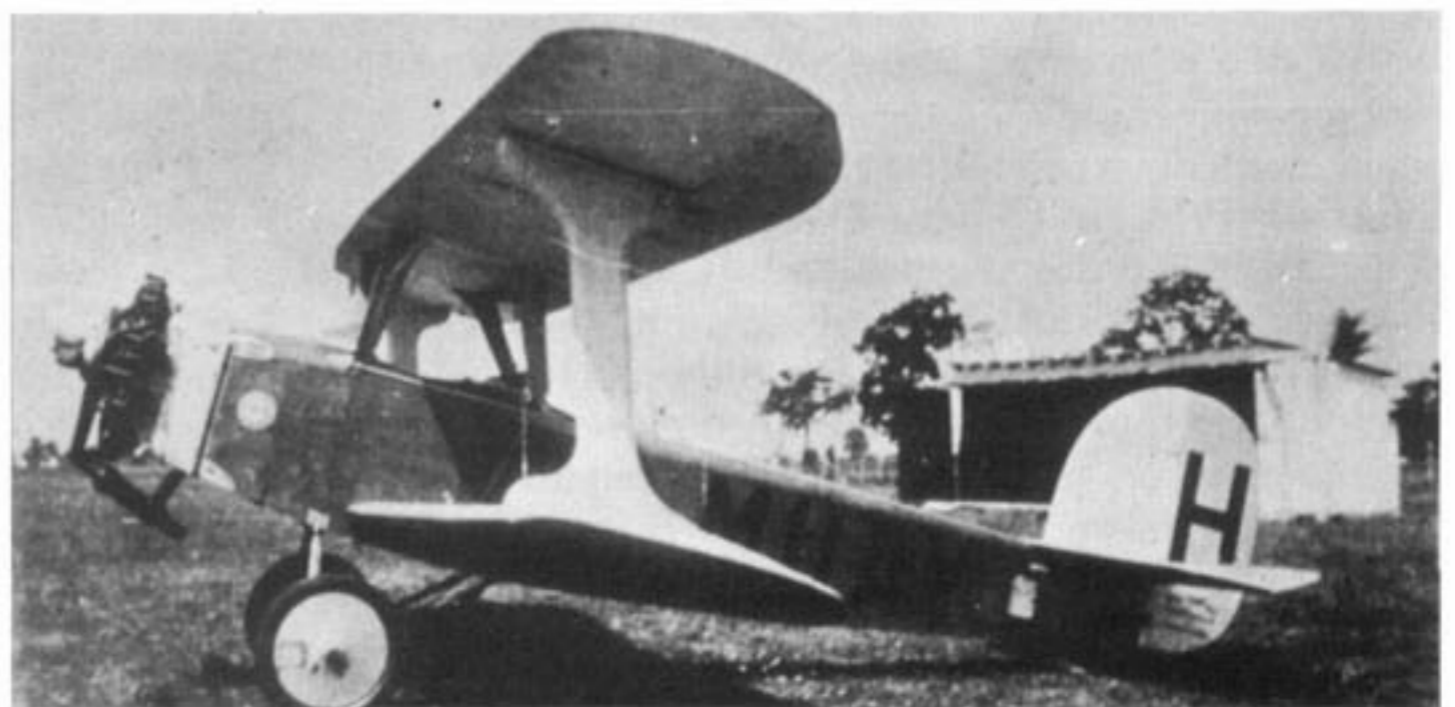
The first wing built was tested to destruction in 1928; and the first licence-built U-12b was test-flown in April 1929, civil registered H-MASC. Like the Hungárias, the WM Flamingos were powered by the 125/108 h.p. Sh 12 engine, licence-built by the Manfred Weiss enterprise.

While most of the locally-manufactured Flamingos and Hungárias were claimed by the important Central Flying School at Szombathely, some were assigned to combat units for use both as utility "hacks" and interim trainers. A few did find their way to genuine civilian aero-clubs, but still more went to the LüH clubs at Miskolc, Debrecen, Pécs and Szeged, which were nothing less than clandestine training centres supplementing the output of the Central Flying School until 1932.

In 1927, identifiable civil registration series were allotted to all Flamingos and Hungárias of which the following are selected examples, namely the first registrations of each series:

Flamingos—H-MASC (from January 1, 1932: HA-ASC); H-MUAA (HA-UAA); H-MUBA

H-MUAY (later HA-UAY) was a Hungarian licence-built U-12b seen here at Szeged in 1933. The manufacturer's badge (Manfred Weiss) appears as a light-coloured disc just forward of the main undercarriage leg. This particular U-12b served with the "Met. Air Agency". (Photo: via László Winkler)



(HA-UBA); H-MUCA (HA-UCA); and H-MUDA (HA-UDA).

Hungárias—H-MHUA (from January 1932: HA-HUA); H-MHOA (HA-HOA); and H-MHAA (HA-HAA).

In 1935, the series HA-HIA, 'B, 'C... was also allocated to Hungárias but not fully taken up. Neither Flamingos nor Hungárias carried any military markings until 1938.

One of the Hungarian Flamingos, HA-UBI was used for the first glider aero-tow experiments in Hungary in May 1933, towing a Sóstó-built "Professor" sailplane of German origin.

During 1935 and 1936, when the large-scale expansion of the still-secret Magyar Királyi Légierő (Royal Hungarian Air Force) was started, Flamingos and Hungárias began to be replaced by newer types. Those still surviving went to new combat units to be used as "hacks".

From September 1938, when Hungary had regained the freedom over her military development, all Flamingos and Hungárias carried the military national insignia of triangular red, white and green markings. Military serials replaced civil marks: Flamingos were given serials K.101 to K.118 and the Hungárias carried serials K.001 to K.012.

In 1941, as previously noted, one of the original BFW-built Flamingos was bought by the German Terra film company for the flying sequences in *Quax, der Bruchpilot*.

Flamingos in Latvia

In the summer of 1928, BFW sent a Flamingo on a demonstration tour through the Baltic States and this resulted in an order from the Latvian government for one Flamingo and a license agreement with the aircraft branch of AS Chr. Backman.

This limited company (identified by the prefix AS) was owned by Mrs. Christine Backman-Meierovics, the widow of the first Latvian minister of external affairs, Zigfrids Meierovics. The company was in the coal importing business but, through its connection with government circles, had established in 1925 an aircraft factory in Riga and had obtained contracts from the government to build two Albatros B II biplanes for the flying school of the Latvian Aviation Regiment (Aviacijas Pulks).

The firm had also built two training biplanes of original design as well as two Hansa-Brandenburg W-29 and Caudron C-60 seaplanes under the technical supervision of Karlis Irbītis.

In the summer of 1929, a contract to build 10 U-12bs was obtained from the government and a complete set of plans was supplied by BFW.

Building the wooden components presented no problem as Latvian pine and birch plywood were recognised as good material; even being exported to Germany, Italy, Czechoslovakia and other countries.



Latvian licence-constructed U-12b, No. 86 was built in Riga by AS Chr. Backman and eventually served with the Latvian Aviation Regiment. The photograph was taken in August 1930. (Photo: Karlis Irbītis)

A problem arose over those parts which had to be manufactured from Duralumin. Heat treatment of this alloy required special salt bath ovens of considerable size and therefore the larger metal components were supplied by BFW initially. Later, however, even these fabricated parts were produced in the Aviation Regiment Workshops (Aviacijas Pulka Darbnīcas).

The Siemens & Halske Sh 12 engines were obtained through the Latvian government, while the Hugo Heine propellers, the instruments and wheels were ordered by AS Backman directly in Germany.

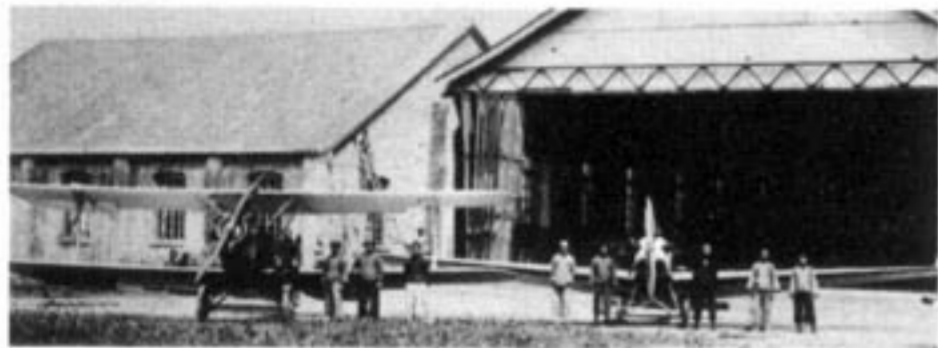
Due to the continuing (from 1929) worldwide recession in the spring of 1930, AS Backman went bankrupt and the Flamingos were finished under the supervision of a staff from "Arsenals", the Ministry of Defence armament workshops, in Riga.

Finally, in the summer of 1930, the Flamingos were delivered to the Aviation Regiment and test flown by its pilots. Later on, two more Flamingos were built at the Aviation Regiment Workshops.

The aircraft were used as basic and aerobatic trainers and, though normally based at Spilve aerodrome, they attended other airfields when required.

Some of the Latvian Flamingos were clear varnished, carrying a black number on their silver rudder, while others were dark green overall with a white outlined black number on the rudder. National markings comprised a red Ugunskrusts or fylfot, a swastika positioned diagonally on a white roundel.

One of the Latvian Flamingos (No. 77), was experimentally fitted with a Czechoslovakian Walter Mars radial engine of 145 h.p. but later reverted to the normal 125/108 h.p. Sh 12. In 1936, two others were equipped with a full blind-flying panel and fitted with a hood over the rear cockpit to be used for instrument flight training until the occupation of Latvia by the Soviet Union on June 17, 1940. All the remaining Flamingos were lost when the building where they were in storage caught fire and burned down.



Flamingos in Other Countries

Africa—After a fund-raising tour around Germany, a U-12a (c/n 388; D-1400) originally operated by DVS (June 1928) and then DVL (October 1928), was shipped to South Africa where it was used on missionary work by “The Flying Father”, Fr. Paul Schulte of MIVA (Missions-Verkehrs-Arbeitsgemeinschaft eV); not least to provide transport for Catholic missionaries. The MIVA badge appeared on the nose of the fuselage and the Papal colours of white and yellow adorned the Flamingo’s rudder.

Belgium and The Netherlands—A German-registered Flamingo flew in Belgium in the late 1920s or early 1930s carrying on its wings and fuselage publicity for a travelling circus called “Cirque Gleich”. In Holland, a Flamingo (D-1206) then owned by Richard I. Kern (and later, as previously noted by Dr K. Schwickerat) was used at air displays by the aerial acrobat, Oskar Dimpfel.

China—In 1929, BFW sold some Flamingos

(probably three) and an M 23 to be used for training Chinese military pilots at the Aviation Centre, Shien-Si. They were imported by the DEFAG agency, which represented in China such German enterprises as AEG, Siemens and Bayer. Very little is known about these aircraft. An intelligence report, dated April 7, 1930, from Lieutenant-Colonel Nelson Margetts, U.S. military attache in China, noted that two BFW aircraft (with no other designation) were stationed at Taiyuanfu under the command of a provincial warlord, Yen Hsi-shan, who administered Shansi Province in northern China.

Italy—One of the earliest Flamingos to be exported by Udet-Flugzeugbau (c/n 268) was sold to Italy’s Reale Aero Club d’Italia (later, Reale Unione Nazionale Aeronautica) and was registered I-UDET. Possibly this was the Flamingo Italo Balbo flew to obtain his pilot’s licence. As a lieutenant of the Alpini, Balbo had volunteered for the Italian Air Force in October 1917; but had only just started elementary training at Turin’s Mirafiori airfield when he went back to his former regiment. After playing a prominent part in the rise of the Fascist party and in the “*Marcia su Roma*” (March on Rome), Mussolini named him Under-Secretary of State for Air on November 26, 1926. He began taking flying lessons again and it was not long before he could proudly show Mussolini the barograph recording of his examination flight in a Flamingo. Strangely, I-UDET was still flying in Italy after World War Two. Based at Gorizia airfield (35 km/22 miles n.n.w. of Trieste), I-UDET suffered a loss of engine power on December 19, 1949, while on a flight between Jesi and Perugia. Extensive damage was sustained in the resultant emergency landing on Mount Revellone. This Italian-registered Flamingo was probably the last U-12 to fly.

Sweden—Some time after Paul Bäumer’s fatal spin into the Sound (off Copenhagen) while testing the Rohrbach Rofix on July 15, 1927, the company bearing his name (Bäumer-Aero GmbH) sold one of its Flamingos (c/n 255, D-803) to Douglas Hamilton who had learned to fly at Enock Thulin’s establishment at Landskrona (n.n.w. of Malmö) in 1917, and had an interest in a flying-school at Glemmingerbro (Ystad, s. Sweden). On one memorable occasion, this now Swedish-registered (SE-ADY) Flamingo towed Hamilton in a glider across the Baltic Sea, from Riga, Latvia to Jönköping on the shores of Sweden’s Lake Vättern. This was an aero-tow of more than 600 km (375 miles). Later, the school went out of business and SE-ADY was cancelled from the Swedish civil register on June 14, 1936.

Turkey—In 1928, BFW demonstrated two Flamingos, a U-12a (c/n 342; D-1274) and a U-12b at Ankara, Istanbul (then Constantinople) and Eskişehir (roughly midway between the two cities). The two aircraft had been shipped to the Sea of Marmara from the Italian port of Genoa.

BFW 1: Literally “The daring young man on the flying trapeze”, daredevil Luftakrobat Oskar Dimpfel performs under the prototype Sperber during an Air Day display held at the Central Airport of Berlin-Tempelhof in August 1929. (Photo: Bundesarchiv ABC ref. 1012-II)

Africa: A U-12a (D-1400) was engaged in missionary work, operated by MIVA, in South Africa. The pilot was Fr. P. Schulte. (Photo: via Ewald Delbaere)

China: DEFAG personnel pose in front of a BFW U-12 and a BFW M 23 on August 30, 1929, at the Aviation Centre, Shien-Si, where the aircraft had just been test-flown for the first time after shipment reassembly. (Photo: via Hanfried Schliephake)

Italy: An elegant and happily smiling Italo Balbo stands by his Flamingo while an officer of the Regia Aeronautica shows Benito Mussolini (in battered hat) the barograph from the U-12 recording Balbo’s pilot’s licence examination flight. (Photo: via Author’s archives)

Turkey: D-1274 was one of two demonstration Flamingos seen in Turkey in 1928, although later, in 1930, it was sold to Unterfränkische Sportflug GmbH. at Würzburg. (Photo: via Willy Radinger)



One of the demonstrator pilots was Willy Stöt. Reports that some Haringsos were a design study used by a flying organization of the Turkish Air League (TH—Türk Hava Kurumu) called Türk Kupa, or Turkish Cup, have not been verified.

Harings Development by BFW

When BFW, the Ravensburg Flugzeugwerke AG of Augsburg, had taken over production of the Harings, not only had all materials been adapted for easier production and full interchangeability of all parts but also it had been decided to improve the model. Among things to be changed was the fuselage, from wood to welded steel-tube framework.

There had been many differences of opinion between the Harings's designer, Dipling, Hans Hermann and BFW's management. Almost inevitably, he departed—in the interim of 1928—and went to the Capot-Herke AG at Traventriede-Prissell. He was replaced, rather conveniently by Dipling, Karl Theiss who, in fact, had been chief designer at Capot.

BFW 2—The first development by Theiss was the BFW 2, the sole prototype of which, a BFW 2a (c/n.352), was first flown in late 1927. Also named the Mandu (Manduca Stork), the BFW 2 was almost identical to the Harings except for its steel-tube fuselage framework and bench-type tabs above the ailerons and forward-biased tailfin ribs in modified main undercarriage. B.G. Me the BFW-built U-12, the Mandu was offered in two powerplant versions, the BFW 2a with a 96/94 h.p. Hermes 8 and the BFW 2b with a 120/108 h.p. 5b U 19 cylinder. The engine BFW 2a appeared on the German civil register as D-5211 in February 1928 and, in June of the same year, changed ownership to DVL. Thereafter it served with the DVL flying school at Göringberg, in East Prussia.

BFW 1—A development which departed more from the original U-12 was the BFW 1 Spitzer (Spurshaukel) which, chronologically coming before the BFW 2, had taken longer to develop and build. It possessed an improved steel-tube



fuselage, and more conventional Nipper steel-tube wing struts, and the BFW 1's undercarriage.

Only one prototype of the 5b U-powered BFW 1a (c/n.371, D-1179) was built. For some time it was used by the DAV and, later, by the former Udet-Flugzeugbau test pilot, Alexander von Bernburg, who provided flying tuition and also flew it at all shows. Subsequently, the sole BFW 1 was acquired by Eugen Pries as a museum-piece.

BFW M 20—BFW's final attempt to build a better biplane than the Harings was the M 21, developed after Willy Inzensohnert joined the company. While similarly possessing the BFW 1's development of a steel-tube fuselage wing struts but with the ailerons main-planes folding back along the fuselage and modified undercarriage, the actual design was completely different from the U-12.

Three versions of the M 21 were projected with different powerplants: M 21a with an 5b U; M 21b with an 5b U; and M 21c with a 60-hp GZ 75 h.p. Cirrus 2B. A MDG Alcock 1601 4-cylinder inline. Only one prototype, each of the first two variants was constructed, both in 1928. The M 21a was registered D-1566 (c/n. 475) and the M 21b became D-1568 (c/n. 476). The DAV undertook to evaluate them and the M 21b was exhibited at the Internationale Luftfahrt-Ausstellung (I.L.A.) Berlin, in 1928; later, it was allocated to the DVL.

BFW U 12—By 1928, the year before war broke out, the U-12 in its new, the Mandu (Manduca Stork) was supported by the DVL. The U-12 was the only aircraft of the U-12 series to be supported by the DVL. The U-12 was the only aircraft of the U-12 series to be supported by the DVL. The U-12 was the only aircraft of the U-12 series to be supported by the DVL.

BFW U 12—By 1928, the year before war broke out, the U-12 in its new, the Mandu (Manduca Stork) was supported by the DVL. The U-12 was the only aircraft of the U-12 series to be supported by the DVL. The U-12 was the only aircraft of the U-12 series to be supported by the DVL.



Flying the Flamingo

Who better to voice his opinions on the merits of the Flamingo than one who flew the U-12 for four years, almost daily, in the early 1930s? Still a pilot at the time of writing, Peter Riedel wrote from Tanzania where, in his 68th year, he was flying—again almost daily—for the East African Medical Society. He remembers:

'After learning to fly at the Luftreederei at Magdeburg late in 1925, I went to the Berlin-Staaken branch of Sportflug GmbH where they had quite a number of Flamingos.

'After the Albatros B II, the LVG B III and the touchy Dietrich DP IIa, it was a real joy to fly the Flamingo. Rarely did a sports aircraft have such pleasant flying properties. The double ailerons in upper and lower wing gave excellent response around the rolling axis, a little bit dampened by (in comparison with the DP IIa) the large span. The V-form (dihedral) of the wings gave it a natural stability so that the good bird almost flew itself.

'Later, when I had accumulated many hundreds of hours on the RRG (Rhön-Rossitten-

Gesellschaft eV) U-12a, I many times succeeded in climbing through the cloud deck for up to 15 minutes without a turn-and-bank indicator, simply by using the rudder to keep the compass from turning. The Flamingo almost flew itself during such flights, which today I would never do again!

'In the summer of 1928, I went to the DVS at Schleissheim to learn aerobatics. There one learned what a Flamingo could take when one had to give full rudder after letting the speed build up during a dive in order to make a snap roll. When flying inverted, the engine sputtered after a few seconds so that inverted flights were usually only short inverted glides.

'When spinning, the rotational speed was not too high and the glide path not too steep, just right for a beginner; and how easily the Flamingo came out of a spin.

'Through its stability, the Flamingo was eminently suited to tow gliders; and, even if it was no Bücker Bü 133 Jungmeister when it came to aerobatics, it was such a "smooth-and-sweet" aircraft that one never forgets even after flying so many other types.'

FLAMINGO PRODUCTION SUMMARY

Precise details of all airframes built are not available but the following summary is a reasonable approximate guide to Flamingo variants produced in Germany and other countries:

	Total
Austria (BFW U-12=20; U-12o=10)	30
Germany (Udet U-12=30; BFW U-12=150)	180
Hungary (BFW U-12=40; Hungária=80)	120
Latvia (BFW U-12=12)	12
	—
	342

BRIEF SPECIFICATION: BFW U-12a FLAMINGO (96/84 h.p. Siemens & Halske Sh 11)

Purpose: Training and aerobatics. No. of seats: 2/3.
Dimensions: Span, 32.8 feet; length, 24.6 ft; height, 9.2 ft.
Propeller diameter, 7.9 ft. Main wheel track, 5.3 ft.
Mainplane dihedral (V-form or V-Stellung), 3 degrees. Mainplane sweepback (Pfeilstellung) 3 degrees.
Areas: Wing, 258 square ft; ailerons (four), 26.7 sq. ft; tailplane, 19.4 sq. ft; elevators, 16.2 sq. ft; fin, 7.5 sq. ft; rudder, 10.8 sq. ft.
Weights: Empty, 1,100 pounds; disposable, 663 lb; loaded, all-up, 1,763 lb. Fuel capacity, 21.1 imp. gallons.
Loadings: Wing, 6.85 lb/sq. ft; power, 22 lb/h.p.
Performance: Maximum (V max), 87 mph; landing, 47 mph; climb rate, 335 ft/min; climb to 3,300 ft, 9 min; service ceiling, 11,000 ft.
NOTE: Data extracted from contemporary trilingual brochure prepared by BFW.

ACKNOWLEDGEMENTS

In truth, what started out as part of a long-term general research into the life and times of Ernst Udet has become a *Profile* entity in itself and embraces the assistance of more people than it is possible to list by name here.

Photographic credits have been individually or institutionally subscribed and, in many cases, represent an extension to the following list of names in that many supplying photos have also been generous in advancing valuable research material.

To everyone, the author offers sincere thanks (and apologies to any whose names have been unintentionally omitted). However, the author feels he must pay tribute to the following without whose special assistance, certain facets of the Flamingo history could not have been related: R. Bateson (German Aviation Research Group, *Air-Britain*), W. Bittner, H. Ebert, E. Delbaere, Dott. G. Chergo, Ing. K. Hevn, Frau C. Hirth, Gen.a.D. A. Galland, K. Irbitis, F. Jacobsen, B. Lange, Lufthansa (PR Dept.), A. Maes, P. Riedel, H. Reichenberg, J. Richardson (Austrian Aviation Research Group, *Air-Britain*), K. Riess, L. Sarjeant, Dr. A. Slater, R. Smith, G. Van Acker, P. van Husen, Cdt. Verelst, H. Volker, Dr. H. Waldhausen, J. Underwood; and, not least, to the author's old friend, Willy Rädinger, without whose encouraging help there could have been no *Flamingo Profile*.

Series Editor:
CHARLES W. CAIN

HUNGARIA VARIANTS: COMPARATIVE DATA (125/108 h.p. WM licence-built Siemens & Halske Sh 12)

	I	II	III	IV	V
Span: m (ft)	10,0 (32.81)	10,3 (33.79)	10,5 (34.45)	(as II)	(as II)
Length: m (ft)	7,4 (24.28)	6,9 (22.64)	7,7 (25.26)	(as II)	(as II)
Wing area: sq.m (sq. ft)	25,0 (269.1)	26,0 (279.9)	(as I)	(as II)	(as II)
Wing loading: kg/sq.m (lb/sq. ft)	33,7 (6.90)	30,0 (6.14)	35,0 (7.17)	32,0 (6.56)	38,0 (7.78)
Weight empty: kg (lb)	590 (1,300)	547 (1,206)	595 (1,312)	582 (1,273)	587 (1,294)
Weight loaded: kg (lb)	840 (1,852)	797 (1,757)	845 (1,863)	817 (1,801)	897 (1,978)
Speed Vmax: km/h (mph)	150 (93)	140 (87)	165 (103)	(as I)	(as II)
Wing strut formation	N-type	N-type	N-type ¹	I-type	N-type

¹Variant III also had propeller spinner, Townend-ring (engine cowling) and modified main undercarriage.