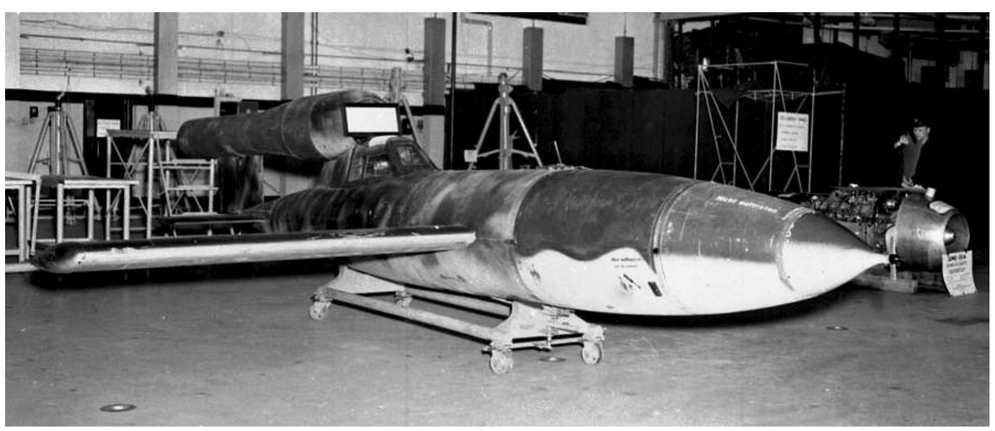
German Warplanes flown by the Luftwaffe 1939-1945, Arado to Dornier

German Warplanes flown by the Luftwaffe 1939-1945

Arado to Dornier

During and after the end of the Second War a number of German Warplanes were captured and evaluated by the Allied forces. Most of these aircraft were later scrapped and therefore only a handful have survived. This is a partial list of aircraft that were known to have been collected, with a few photos of the German aircraft in RAF, USAAF and Soviet Air Force markings from the time of their capture. Survivors where known are included along with a few photos of them in museums where found.

Data current to 17 Dec 2018.



Fieseler Fi-103R Reichenburg Re IV flying bomb on display on Air Force Day at RCAF Station Trenton, Ontario, 16 June 1947. This piloted version of the "Buzz Bomb" was brought to Canada in 1945 by Captain Farley Mowat's Intelligence Collection Team. This Re IV is currently preserved in the Canadian War Museum, Ottawa, Ontario. (Library and Archives Canada Photo, MIKAN No. 3584067)

" *.. the Fi 103 R was a piloted FZG -76 V 1 flying bomb test flown by Hanna Reitsch. Modifications include the addition of a four foot (1.2m) belly skid and basic eight-instrument cockpit containing a backless wooden seat and crude headrest. A stick controls the elevators and ailerons, the throttle was made of wood and a button controlled fuel flow. Frightening to fly, surely....*" Michael Bowyer on the RAE German aircraft and Equipment Exhibition, Farnborough, England October 1945.

Second World War Aircraft Salvage

It has been said that the most important thing to learn about flying is how to land safely, and this of course applies to all operators of flying machines. This is much more difficult to do when someone has been shooting at you and your machine has been banged up like a drum because someone has been shooting at you with cannon, machine guns and FlaK. The combat tion machines lost to the persistent perils of war need to be replaced, and to that end, when an airplane was written off during the Second World War, all efforts were made to recover and salvage parts and materials from shot down and crashed machines for recycling purposes.

Thousands of flying machines and weapons of war were assembled by the large numbers of combatant nations taking part in the conflict from 1939 to 1945, and a great number of them were lost in the battles that eventually brought the war to an end. Post war, all participating nations quickly needed to get their economies back on a practical footing, and the race began in earnest to add as much surplus metal to the industries that put stoves, washing machines, cars, radios and all the conveniences of the future back in the market place. Keeping old worn out warplanes on hand in large numbers served no practical purpose to the nations in need at that time, and the scrapping and destruction processes began almost as quickly as the war ended.

A handful of visionaries thought some of the former “enemy” technology might be useful to future forces. As the Cold War set in, it became increasingly obvious that if power were to remain in the hands of free nations, they had to be prepared to be armed with better equipment than that in the hands of potential aggressors. In post-war 1945, Russian, British, French, Canadian and American technical experts began scouring Europe and Asia looking for any and all technology that could be of interest and benefit to the conquering nations. In the case of aviation, technical intelligence was the priority, and to that end, key teams of experts were assembled and sent overseas to gather, collect and bring home captured foreign aircraft and equipment for evaluation and where useful, integration into future programs for the defence of the West. Some of the

1 Canadian Air Group, Canadian Forces Europe

1st Canadian Parachute Battalion, 1st Special Service Force and Canadian Airborne Units before 1968

4 Canadian Mechanized Brigade Group, Canadian Forces Europe

Aircraft preserved in Canada 1: Warplanes in British Columbia

Aircraft preserved in Canada 1: Warplanes in British Columbia, CFB Comox Air Force Museum

Aircraft preserved in Canada 1: Warplanes in British Columbia, Langley, Canadian Museum of Flight

Aircraft preserved in Canada 1: Warplanes in British Columbia, Sidney, British Columbia Aviation Museum

Aircraft preserved in Canada 2: Warplanes in Alberta

Aircraft preserved in Canada 2: Warplanes in Alberta, Calgary, The Hangar Flight Museum

Aircraft preserved in Canada 2: Warplanes in Alberta, Canadian Forces Base Cold Lake, Air Force Museum

Aircraft preserved in Canada 2: Warplanes in Alberta, Edmonton, Alberta Aviation Museum

aviation equipment captured or seized as war prizes made its way to Canada and other Commonwealth nations as well as the USA and USSR. Their present status and location where known is summarized here.

Captured aircraft flown by the RAF and members of the RCAF were assigned an Air Ministry (AM) number. The Axis aircraft flown by the Americans were initially given a Foreign Equipment (FE) number and later a Technical (T) number. These numbers were primarily used to "identify aircraft of intelligence interest at their place of surrender in Germany or Denmark, and to clearly segregate such aircraft from the far larger number of aircraft which were to be destroyed as being of no further use."

A typical airfield at the time of the surrender in May 1945 held perhaps 400 or more Luftwaffe aircraft of which perhaps ten were selected for evaluation in England, while a few others such as communications or trainer types were allocated for use by the RAF in Germany or to Allied governments for re-equipment of their own air forces. Phil Butler, *War Prizes,* p. 75.

The collection of ex-Luftwaffe aircraft for evaluation had been initiated by the British Air Ministry's Branch Al 2 (g), the group which had been the intelligence gatherer and collator of Luftwaffe aircraft information since before the start of the Second World War. It was this group which, with assistance from the British wartime Ministry of Aircraft Production, had drawn up a "Requirements List" of items needed for evaluation in England after the war.

The list had been initiated during 1944 and was in the hands of Air Technical Intelligence teams in Europe prior to the German collapse in May 1945. The list was amended as new requirements were identified; these amendments included previously unknown aircraft or items of equipment found on the ground by the intelligence teams. With the end of hostilities the Air Technical Intelligence teams were reinforced by experienced pilots and engineers, many of them from the RAF Central Fighter Establishment (CFE) at Tangmere in England. The personnel included members of the former No. 1426 Flight which had been incorporated into the CFE shortly before the end of the war.

It was quickly determined that it would be a good idea to conduct the ferrying of unfamiliar aircraft types by trained test pilots. The business of selecting German aircraft and pilots to ferry them to England was handed over to the Royal Aircraft Establishment (RAE). Wing Commander Eric M. Brown was placed in charge of the reception of German aircraft at Farnborough, and his superior, Group Captain Alan F. Hards, Commanding Officer experimental Flying at RAE, took over responsibility for the selection of suitable aircraft. The servicing of aircraft prior to their delivery to Britain remained an RAF responsibility and this task was carried out by No. 409 Repair and Salvage Unit, based at Schleswig in northern Germany.

The Royal Aircraft Establishment was a British research establishment known by several different names during its history that eventually came under the aegis of England Ministry of Defence (MoD), before finally losing its identity in mergers with other institutions. The first site was at Farnborough Airfield (RAE Farnborough) in Hampshire to which was added a second site RAE Bedford (Bedfordshire) in 1946. During the Second World War, the Marine Aircraft Experimental Establishment, then based at Helensburgh in Scotland, was also under the control of the RAE. Internet: http://en.wikipedia.org/wiki/Royal_Aircraft_Establishment.

The RAE set up an outpost at Schleswig, commanded by RCAF Squadron Leader Joe McCarthy, to co-ordinate the delivery of selected aircraft to Schleswig for overhaul, and to control the acceptance test flights of individual aircraft at the completion of their servicing routine. The RAE then took over the delivery of the aircraft to England via one or more established staging posts in Holland or Belgium which were provided with jet fuel and other support facilities.

This list roughly includes most but not all of the aircraft used by the Luftwaffe during the Second World War. Where possible, photos of aircraft at the time of their capture in their original markings are provided, followed by photos where available in RAF and/or USAAF service, and if preserved today as they are displayed in museums around the world. Updates and particularly photos of these aircraft missing from the collection that can be shared freely on the net would be most welcome.

Harold A. Skaarup

Former Honorary Lieutenant-Colonel for 3 Intelligence Company, Halifax

Aircraft flown by the Luftwaffe during the Second World War



AGO Ao 192, Reg. No. D-OCTB, Tunis, 1939. The AGO Ao 192 was a twin-engined aircraft designed and built by AGO Flugzeugwerke in the 1930s. A small production run of six aircraft followed three prototypes, these being used as transports. The six production aircraft were acquired by the German state, with one being used as the personal transport of Robert Ley, the head of the German Labour Front, while others were used as transports by the Waffen-SS and at the test-centre at Rechlin. (Grésillaud Photo)

Aircraft preserved in Canada 2: Warplanes in Alberta, Nanton, National Bomber Command Air Museum

Aircraft preserved in Canada 2: Warplanes in Alberta, Wetaskiwin, Reynolds-Alberta Museum

Aircraft preserved in Canada 3: Warplanes in Saskatchewan

Aircraft preserved in Canada 4: Warplanes in Manitoba

Aircraft preserved in Canada 4: Warplanes in Manitoba, Canadian Forces Base Winnipeg, Air Force Heritage Museum and Air Park

Aircraft preserved in Canada 4: Warplanes in Manitoba, Winnipeg, Royal Aviation Museum of Western Canada

Aircraft preserved in Canada 5: Warplanes in Ontario

Aircraft preserved in Canada 5: Warplanes in Ontario, Canadian Forces Base Borden, Base Borden Military Museum

Aircraft preserved in Canada 5: Warplanes in Ontario, Canadian Forces Base Trenton, National Air Force Museum of Canada

Aircraft preserved in Canada 5: Warplanes in Ontario, Mount Hope, Canadian Warplane Heritage Museum

Aircraft preserved in Canada 5: Warplanes in



Albatros Al 101. (Luftwaffe Photo)

Albatros Al 102 (prototype).



Albatros Al 103 (prototype). (Luftwaffe Photo)



Arado Ar 64, fighter biplane (prototype). (Luftwaffe Photo)

Ontario, Ottawa, Canada Aviation & Space Museum, Avro to Bristol

Aircraft preserved in Canada 5: Warplanes in Ontario, Ottawa, Canada Aviation & Space Museum, Canadair to Fairchild

Aircraft preserved in Canada 5: Warplanes in Ontario, Ottawa, Canada Aviation & Space Museum, Fairey to Noorduyn

Aircraft preserved in Canada 5: Warplanes in Ontario, Ottawa, Canada Aviation & Space Museum, North American to Zenith

Aircraft preserved in Canada 5: Warplanes in Ontario, Ottawa, Canadian War Museum

Aircraft preserved in Canada 6: Warplanes in Québec

Aircraft preserved in Canada 6: Warplanes in Québec, Gatineau, Vintage Wings of Canada

Aircraft preserved in Canada 7: Warplanes in New Brunswick

Aircraft preserved in Canada 8: Warplanes in Prince Edward Island

Aircraft preserved in Canada 9: Warplanes in Nova Scotia

Aircraft preserved in Canada 9: Warplanes in Nova Scotia, Greenwood Military Aviation Museum

Aircraft preserved in Canada 9: Warplanes in Nova Scotia, Halifax,



Arado Ar 65F, fighter/trainer biplane (re-engined Ar 64), coded PF+NS. (Luftwaffe Photo)







Atlantic Canada Aviation Museum

Aircraft preserved in Canada 9: Warplanes in Nova Scotia, Shearwater Aviation Museum

Aircraft preserved in Canada, 10: Warplanes in Newfoundland & Labrador

Aircraft preserved in Canada, 11: Northwest Territories; 12: Nunavut; 13: Yukon Territory

Armoured Fighting Vehicles and Tanks preserved in Canada 1: British Columbia

Armoured Fighting Vehicles and Tanks preserved in Canada 2: Alberta

Armoured Fighting Vehicles and Tanks preserved in Canada 3: Saskatchewan

Armoured Fighting Vehicles and Tanks preserved in Canada 4: Manitoba

Armoured Fighting Vehicles and Tanks preserved in Canada 5: Ontario

Armoured Fighting Vehicles and Tanks preserved in Canada 5: Ontario, Canadian Forces Base Borden

Armoured Fighting Vehicles and Tanks preserved in Canada 5: Ontario, Canadian Forces Base Kingston

Armoured Fighting Vehicles and Tanks preserved in Canada 5:



Arado Ar 66, trainer/night attack. The Ar 66 entered service with the *Luftwaffe* in 1933, serving as a trainer until well into the Second World War. In 1943, the *Luftwaffe* set up a number of night harassment groups to operate on the Russian front. The Ar 66, along with the Gotha Go 145, formed the main equipment of these groups. (Luftwaffe Photos)

Arado Ar 66 (Wk. Nr. unknown). Remains of this aircraft are stored in the Flyhistorisk Museum, Stavanger Airport, Sola, Norway.



Arado Ar 67, fighter biplane (prototype). (Luftwaffe Photo)



Ontario, Canadian Forces Base Petawawa

Armoured Fighting Vehicles and Tanks preserved in Canada 5: Ontario, Ottawa, Canadian War Museum

Armoured Fighting Vehicles and Tanks preserved in Canada 5: Ontario, Ottawa, Canadian War Museum, captured German kit, Second World War

Armoured Fighting Vehicles and Tanks preserved in Canada 6: Québec

Armoured Fighting Vehicles and Tanks preserved in Canada 7: New Brunswick

Armoured Fighting Vehicles and Tanks preserved in Canada 7: New Brunswick, 5 Canadian Divison Support Base Gagetown

Armoured Fighting Vehicles and Tanks preserved in Canada 8: Prince Edward Island

Armoured Fighting Vehicles and Tanks preserved in Canada 9: Nova Scotia

Armoured Fighting Vehicles and Tanks preserved in Canada, 10: Newfoundland and Labrador, 11: Northwest Territories, 12: Nunavut, and 13: Yukon Territory

Armoured Fighting Vehicles and Tanks



Arado Ar 68, fighter biplane. (Luftwaffe Photos)



Arado Ar 69, 1933 biplane) trainer (prototype). (Luftwaffe Photo)



Arado Ar 76, fighter/trainer biplane (prototype), coded DA+BN. (Luftwaffe Photo)

preserved in Canada, 14: MASTER LIST (no Photos)

Armoured Fighting Vehicles and Tanks preserved overseas used by Canadians

Artillery and Armoured Fighting Vehicles preserved in the USA: Connecticut

Artillery and Armoured Fighting Vehicles preserved in the USA: Louisiana, New Orleans and the National Museum of WWII

Artillery and Armoured Fighting Vehicles preserved in the USA: Louisiana, New Orleans, Jackson Barracks Military Museum

Artillery and Armoured Fighting Vehicles preserved in the USA: Maine

Artillery and Armoured Fighting Vehicles preserved in the USA: Massachusetts

Artillery and Armoured Fighting Vehicles preserved in the USA: New Hampshire

Artillery and Armoured Fighting Vehicles preserved in the USA: Rhode Island

Artillery and Armoured Fighting Vehicles preserved in the USA: Texas, Austin

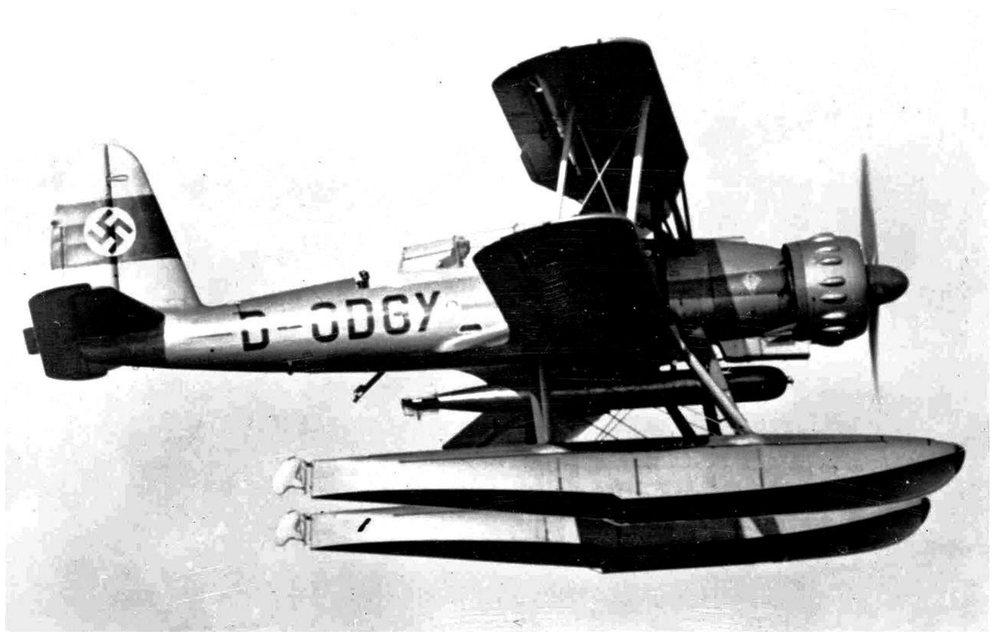
Artillery and Armoured Fighting Vehicles preserved in the USA: Texas, Camp Mabry, Texas Forces Military Museum

Artillery and Armoured Fighting Vehicles preserved in the USA: Texas, Fort Hood, 1st Cavalry Museum

Artillery and Armoured Fighting Vehicles preserved



Arado Ar 80, fighter (prototype). (Luftwaffe Photo)





in the USA: Texas, Fort Hood, 3rd Cavalry Museum

Artillery and Armoured Fighting Vehicles preserved in the USA: Vermont

Artillery of Canada, Library and Archives Canada Photos

Artillery preserved in Canada 1: British Columbia, Belleville, Chilliwack, Cranbrook, Esquimalt, Fort Langley, Kamloops, Kaslo, Kelowna, Ladysmith and Maple Ridge

Artillery preserved in Canada 1: British Columbia, Canadian Forces Base Esquimalt, and Work Point Barracks

Artillery preserved in Canada 1: British Columbia, Colwood, Fort Rodd Hill National Historic Site of Canada

Artillery preserved in Canada 1: British Columbia, Nanaimo, Naramata, North Saanich, North Vancouver, Rogers Pass, Sidney, Trail, Ucluelet, Valemont, Vernon and White Rock

Artillery preserved in Canada 1: British Columbia, New Westminster

Artillery preserved in Canada 1: British Columbia, Vancouver

Artillery preserved in Canada 1: British Columbia, Victoria

Artillery preserved in Canada 2: Alberta, Barrhead, Bellevue, Bragg



Arado Ar 95, coastal patrol and attack biplane floatplane. (Luftwaffe Photos)



Arado Ar 96, advanced trainer, coded +23. The Ar 96 was used for advanced, night and instrument flying training. On the evening of 28 April 1945, pilot Hanna Reitsch flew the head of the Luftwaffe Generaloberst Robert Ritter von Greim out from Berlin under Soviet fire in an Arado Ar 96 trainer from an improvised airstrip in the Tiergarten. (Luftwaffe Photo)

Arado Ar 96B

The Arado Ar 96B is a two-seat advanced flying trainer powered by a single Argus As 410A-1 inverted-Vee engine rated at 465 hp. It had a maximum speed of 205-mph at sea level, a cruising speed of 183-mph, a service ceiling of 23,295', and a range of 615 miles. It had a wingspan of 36'1", a length of 29'10", and a height of 8'6". It was armed with one 7.92-mm fixed forward-firing machinegun. Paul Eden and Soph Moeng, *The Complete Encyclopedia of World Aircraft*, Barnes and Noble Books, New York, 2002, p. 146.





Creek, Brooks, CFB Cold Lake, Didsbury, Fort Macleod, Fort Saskatchewan, Frank, High Prairie, Lougheed and Mannville

Artillery preserved in Canada 2: Alberta, Calgary

Artillery preserved in Canada 2: Alberta, Edmonton

Artillery preserved in Canada 2: Alberta, Lethbridge

Artillery preserved in Canada 2: Alberta, Peace River, Provost, Redcliffe, Red Deer, Sangudo, Sedgewick, Stavely, Taber, Thorhild, Two Hills, Vauxhall, Vermilion and Wainwright

Artillery Preserved in Canada 3: Saskatchewan, Battleford, Estevan, Fort Qu'appelle, Indian Head, Kamsack, Lembourg and Meota

Artillery Preserved in Canada 3: Saskatchewan, Moose Jaw, Ponteix, Saltcoats, Wynard and Yorkton

Artillery Preserved in Canada 3: Saskatchewan, Regina

Artillery Preserved in Canada 3: Saskatchewan, Saskatoon

Artillery preserved in Canada 4: Manitoba, Brandon and Carman

Artillery preserved in Canada 4: Manitoba, Canadian Forces Base

Arado Ar 96B advanced trainer, (Wk. Nr. unknown), captured at Husum. Designated RAF AM120, this aircraft was scrapped at Woodley, England in 1947. (RAF Photos)

Arado Ar 96B advanced trainer, (Wk. Nr. unknown), captured at Husum. Designated RAF AM123, this aircraft was scrapped at Woodley, England in 1947.

More than 11,500 Ar 96 were built by the end of the Second World War. RCAF Squadron Leader Joe McCarthy test flew Arado Ar 96B, (Wk. Nr. unknown), RAF AM123, after the war at Husum.



(Ra Boe Photo)

Arado Ar 96B-1, (Wk. Nr. 425462), NU+CF. This aircraft has been restored using parts of three wrecks and is currently displayed in the Deutsches Technik Museum in Berlin. This Ar 96B-1 has a newly minted fuselage based on a pattern made from a wreck salvaged from a lake. The wings came from an Avia C.2B, built in Czechoslovakia after the end of the Second World War. Sweden provided a number of parts to the museum from Sweden, from an Ar 96, which had been lost in 1944. This aircraft was salvaged and flown by the Swedish Air Force until 1954.

The Deutsches Technikmuseum Berlin (German Museum of Technology), was founded in 1982 in Berlin, Germany. This museum exhibits a large collection of historical technical artifacts. The museum's main emphasis is on rail transport, but it also features exhibits of industrial, maritime and aviation technology. The museum also contains a science center called Spectrum. A Douglas C-47 Skytrain is on display on the roof within view of the Tempelhof Airport. The museum contains an enormous railway collection and a large aircraft section which includes a Messerschmitt Bf 110, Flak cannon, Junkers Ju 87 Stuka and a V-1 flying bomb.

Arado Ar 96B-1, (Wk. Nr. 4246), coded PI+OT, was lost on 13 March 1943 near Bomlo, Norway. It lay in more than 100' of water until recovered 49 years later on 7 November 1992. It is being restored by the Luftfartshistorik Museum in Sola for the Herdla Museum, Norway

An Arado Ar 96B-1 is on display in the Flyhistorisk Museum Sola, Norway. The Flyhistorisk Museum, Sola (Sola Aviation Museum) is an aviation museum located in Stavanger Airport, Sola, near Stavanger, Norway.



Arado Ar 96B (Wk. Nr. unknown), captured by the USAAF, location and details unknown. (Jerry Pinkowski Photo)

Shilo, Royal Canadian Artillery Museum

Artillery preserved in Canada 4: Manitoba, Churchill, Prince of Wales Fort, National Historic Site of Canada

Artillery preserved in Canada 4: Manitoba, Darlingford, Douglas, Neepawa, Pilot Mound, Selkirk, Seven Sisters, Shilo, Upper Fort Garry and York Factory

Artillery preserved in Canada 4: Manitoba, Winnipeg

Artillery preserved in Canada 5: Ontario, Acton, Alexandria, Amherstburg, Arden, Arnprior and Arthur

Artillery preserved in Canada 5: Ontario, Barrie, Bath, Beamsville, Belfountain, Belle River, Belleville, Blenheim, Bracebridge, Brantford, Brockville, Burlington and Burks Falls

Artillery preserved in Canada 5: Ontario, Caledonia, Cambridge Galt, Cardinal, Carleton Place, Cayuga, Chapleau, Chatham, Cobalt, Cobourg and Coe Hill

Artillery preserved in Canada 5: Ontario, Canadian Forces Base Borden

Artillery preserved in Canada 5: Ontario, Canadian Forces Base Petawawa

Artillery preserved in Canada 5: Ontario,



Arado Ar 96B-1, (Wk. Nr. unknown), Avia AG, Prague, 1943, 410a (340 hp) motor. This aircraft is preserved in the Deutschestechnik Museum, Berlin, Germany. (Karsten Palt Photo)

Arado Ar 96B-1, (Wk. Nr. unknown). Remains of this aircraft are preserved in the Flyhistorisk Museum, Stavanger Airport, Sola, Norway.





Colborne, Collingwood, Cookstown and Cornwall

Artillery preserved in Canada 5: Ontario, Dundas, Dunnville, Durham, Eganville, Elliot Lake, Emo, Espanola, Essex, Finch, Flesherton, and Fordwich

Artillery preserved in Canada 5: Ontario, Fort Erie

Artillery Preserved in Canada 5: Ontario, Fort George

Artillery preserved in Canada 5: Ontario, Gananoque, Georgetown, Georgina, Goderich, Goodenham, Gorrie, Grand Bend and Guelph

Artillery preserved in Canada 5: Ontario, Haileybury, Haliburton, Hamilton, Hannover, Harold, Hariston, Hawkesbury, Holstein and Huntsville

Artillery preserved in Canada 5: Ontario, Ingersoll, Innisfil and Iroquois

Artillery preserved in Canada 5: Ontario, Kars, Swords and Ploughshares Museum

Artillery preserved in Canada 5: Ontario, Kenora, Keswick, Kettleby, Kincardine, Kingsville, and Kitchener

Artillery preserved in Canada 5: Ontario, Kingston

Artillery preserved in Canada 5: Ontario,



Arado Ar 197, designed for naval operations for the never-completed German aircraft carrier Graf Zeppelin. One a few prototypes were built. (Luftwaffe Photos)





Arado Ar 199, seaplane trainer (prototype). (Luftwaffe Photos)

Kingston, Canadian Forces Base Kingston

Artillery preserved in Canada 5: Ontario, Kingston, Fort Frontenac

Artillery preserved in Canada 5: Ontario, Kingston, Fort Henry

Artillery preserved in Canada 5: Ontario, Kingston, RMC, Fort Frederick

Artillery preserved in Canada 5: Ontario, Kingston, Royal Military College grounds

Artillery preserved in Canada 5: Ontario, Lakeview, Lincoln, Lisle, London, Longlac, L'Orignal, Lucan, Lucknow and Lunenburg

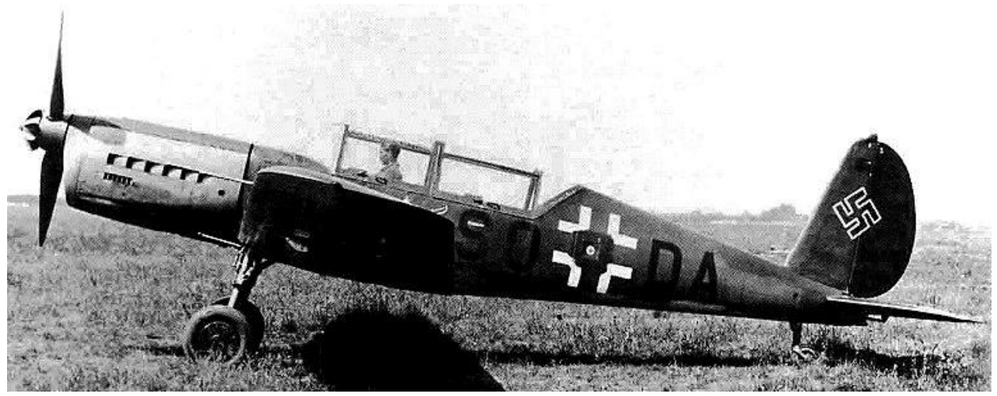
Artillery preserved in Canada 5: Ontario, Madoc, Manitoulin Island, Mannotick, Massey, Meaford, Merrickville, Midland, Milton, Mississauga, Moose factory, Morrisburg, Mount, Mount Forest and Mountain Grove

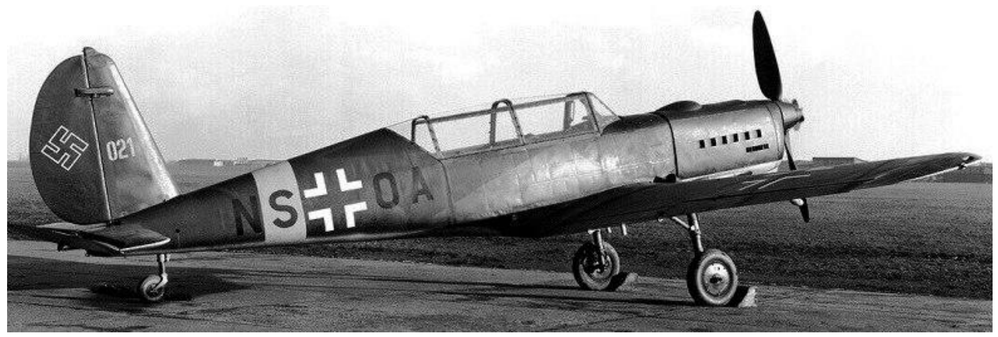
Artillery preserved in Canada 5: Ontario, New Liskeard, New Lowell, Niagara-on-the-Lake, Niagara Falls and Norfolk

Artillery preserved in Canada 5: Ontario, Oakland, Omemee, Orangeville, Orillia, Oshawa and Oshweken

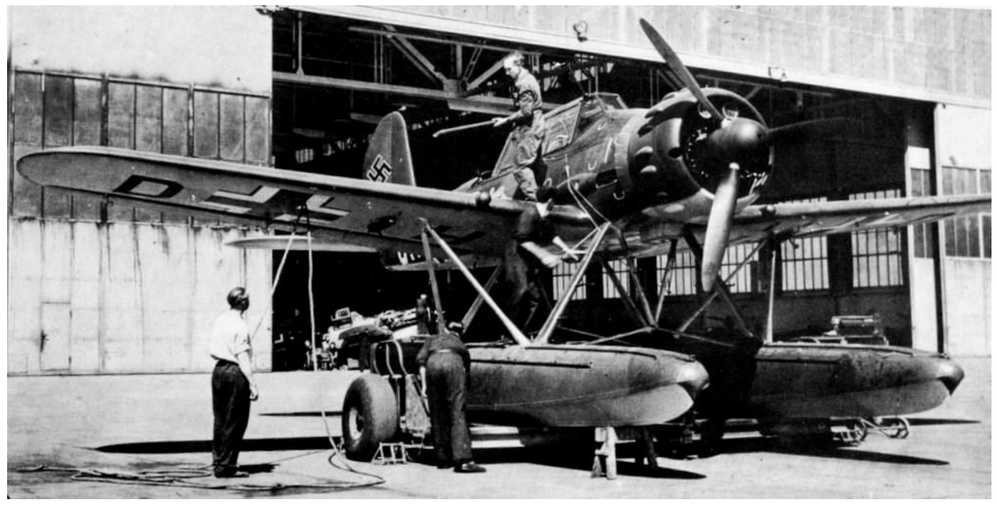
Artillery preserved in Canada 5: Ontario, Ottawa

Artillery preserved in Canada 5: Ontario,





Arado Ar 396, advanced trainer variant of Ar 96. (Luftwaffe Photos)



Arado Ar 196, ship-borne reconnaissance/coastal patrol floatplane. (Luftwaffe Photo)

Ottawa, The Canadian War Museum

Artillery preserved in Canada 5: Ontario, Owen Sound, Pelham, Pembroke, Penetanguishene, Perth, Petawawa, Peterborough, Petrolia and Picton

Artillery preserved in Canada 5: Ontario, Port Colborne, Port Dover, Port Hope and Priceville

Artillery preserved in Canada 5: Ontario, Rainy River, Richards Landing, Sarnia, Sault Ste. Marie, Shelburne, Shirley's Bay, Simcoe, Smith Falls, Southampton, St. Catherines and St. Thomas

Artillery preserved in Canada 5: Ontario, Stoney Creek, Stratford, Strathroy and Stratton

Artillery preserved in Canada 5: Ontario, Tavistock, Thunder Bay, Tilsonburg, Toledo, Trenton, Uxbridge, Verner and Victoria Harbour

Artillery preserved in Canada 5: Ontario, Toronto

Artillery preserved in Canada 5: Ontario, Wallaceburg, Wasaga Beach, Waterdown, Waterford, Waterloo, Watson's Corners, Welland, Whitby, Whitney, Wilberforce, Williamstown, Windsor and Wingham

Artillery preserved in Canada 5: Ontario, Woodbridge and Woodstock



Arado Ar 196A-3 being loaded onto the German cruiser *Admiral Graf Spee*. (Kriegsmarine Photo)

Arado Ar 196A

The Arado Ar 196A was a Luftwaffe two-seat coastal patrol and light attack aircraft powered by one BMW 312K nine-cylinder radial air-cooled piston engine. It had a top speed of 194-mph, a cruising speed of 166-mph, service ceiling of 22,965', and a range of 497 miles. Loaded, it had a weight of 7,282 lbs. It had a wingspan of 40' 10", a length of 35' 11-1/2" and a height of 14'7". It was armed with two wing-mounted 20-mm MG FF cannon with 60 rpg plus one 7.9-mm MG 17 machinegun in the starboard side of the forward fuselage and one 7.9-mm MG 15 on a flexible mounting with 525 rpg; plus one ETC 50/VIII rack underneath each wing for a single 110-lb SC 50 bomb.

The Ar 196A was loved by its pilots, who found it handled well both in the air and on the water. The first Arado Ar 196A to fall into allied hands was an example belonging to the German heavy cruiser KMS *Admiral Hipper* captured in Lyngstad by a Norwegian Marinens Flyvebaatfabrikk M.F. 11 seaplane of the Trødelag naval district on 8 April 1940 at the beginning of the Norwegian campaign. It was flown against its former owners with Norwegian markings. On 18 April 1940 it was flown to the UK by a Royal Norwegian Navy Air Service pilot. Not long afterwards the plane crashed while being flown by a British pilot while in transit to the Helensburgh naval air base for testing. At the end of the war, at least one other Ar 196A was left at a Norwegian airfield and kept in use as a liaison aircraft by the Royal Norwegian Air Force for a year on the West Coast.



Arado Ar 196A-5 (Wk. Nr. 514), ship-borne reconnaissance/coastal patrol floatplane, captured at Schleswig. Designated RAF AM92, this aircraft was scrapped at Felixstowe in 1947. (RAF Photo)

One of the captured Ar 196A seaplanes was flown by RCAF S/L Ian Somerville.

Arado Ar 196A, (Wk. Nr .unknown), captured at Schleswig. Designated RAF AM90, this aircraft was scrapped at Schleswig.

Arado Ar 196A-5, (Wk. Nr. 127), captured at Schleswig. Designated RAF AM91, this aircraft was scrapped at Felixstowe in 1947.

Arado Ar 199A-0, (Wk. Nr. unknown), captured at Schleswig. Designated RAF AM93, this aircraft was scrapped at Schleswig.

Artillery preserved in Canada 6: Québec, Amos, Arundel, Baie du Febvre, Baie St Paul, Beloeil, Brossard, Bryson, Buckingham and Bury

Artillery preserved in Canada 6: Québec, Base de soutien de la 2e Division du Canada Valcartier

Artillery preserved in Canada 6: Québec, Cap-aux-Meules, Cap-des-Rosiers, Causapscal, Coteau-du-Lac, Chambly, Chander, Chateauguay, Cloridorme and Cowansvill

Artillery preserved in Canada 6: Québec, Deux Montagnes, Eccles Hill, Farnham, Gatineau, Granby, Grosse-île, Île aux Noix, Joliette and Jonquiere

Artillery preserved in Canada 6: Québec, Gaspé, Fort Peninsula, Forillon National Park

Artillery preserved in Canada 6: Québec, Kahnawake, Kingsey, Labell, Lac Megantic, Lachute, Laval, Lennoxville, L'Islet-sur-Mer and Longueil

Artillery preserved in Canada 6: Québec, Knowlton, Brome County Historical Society Museum

Artillery preserved in Canada 6: Québec, Maple Grove, Montmagny, Mont Saint Hilaire, New Carlisle, New Richmond, Nicolet, Normandin, Pointe-au-



(1GonZosft Photo)



(Peter Meneely Photo)

Arado Ar 196A-3, ship-borne reconnaissance/coastal patrol floatplane. This aircraft was operated by the Bulgarian Air Force. It is displayed at the Bulgarski Vozdushni Voiski Muzeum (Museum of Aviation and the Air Force), Plovdiv, Bulgaria.

Only three Ar 196A floatplanes still exist from the total production run of 526 aircraft, excluding the prototypes and pre-production aircraft. Ar 196A-3 (Werk-Nummer 75526), coded as “White 3” (Serial No. 0219), is on display in the Bulgarski Vozdushni Voiski Muzeum in Plovdiv, Bulgaria, with Bulgarian insignia. This Ar 196A-3 is one of twelve the Bulgarian Navy operated during the Second World War from Varna on the coast.

Ar 196A-5, (Wk. Nr. 623167) coded +HG, T3+BH, belongs to the National Air & Space Museum. The Allies recovered two Ar 196A-5s found on board the German battlecruiser *Prinz Eugen* when she surrendered at Copenhagen, Denmark.

Ar 196A-5, (Wk. Nr. 623183) coded T3+CH is the second of these two aircraft, and is being restored by the U S Naval Aviation Museum in Pensacola, Florida.

The Norwegian Historical Museum in Sola, Norway, has the fuselage frame of an Ar 196A-2 raised from the sunken German battleship Blücher.

When the US Navy took custody of *Prinz Eugen*, they were more interested in the catapult system used to launch the floatplane rather than the Ar 196A-5 but they saved the two aircraft anyway. The Ar 196A-5, (Wk. Nr. 623167) in the NASM has only 14 hours of operational flying time and U S Navy pilots added just four more hours during testing and evaluation at the Naval Air Materiel Center in Philadelphia, Pennsylvania. The US Navy evidently repainted the airplane with markings copied from a different aircraft. That floatplane bore the code letters GA+DX (Wk. Nr. 68967). Today, the National Air & Space Museum‘s Ar 196A-5 still carries the bogus paint and markings of GA+DX. After years in storage, the Navy transferred the airplane to the Museum in 1961, where it is now preserved.

Both of the Arado Ar 196A-5 floatplanes were recovered from the German cruiser Prinz Eugen by American forces survive. Arado Ar 196A-5 (Wk. Nr. 623167) is in storage at the Paul E. Garber Facility of the Smithsonian's National Air and Space Museum, and awaiting restoration. Ar 196A-5 (Wk. Nr. 623183) was stored with the National Museum of Naval Aviation (NMNA) at Pensacola, Florida. This aircraft is currently on loan to the Aeronauticum Museum at Nordholz, Germany.

Père, Pointe-à-la-Croix, Pointe-à-la-Frégate, Quyon, Rimouski and Rivière du Loup

Artillery preserved in Canada 6: Québec, Montréal and Fort de l'Île Sainte-Hélène

Artillery preserved in Canada 6: Québec, Montréal, Royal Canadian Ordnance Corps Museum

Artillery preserved in Canada 6: Québec, Québec City Fortifications

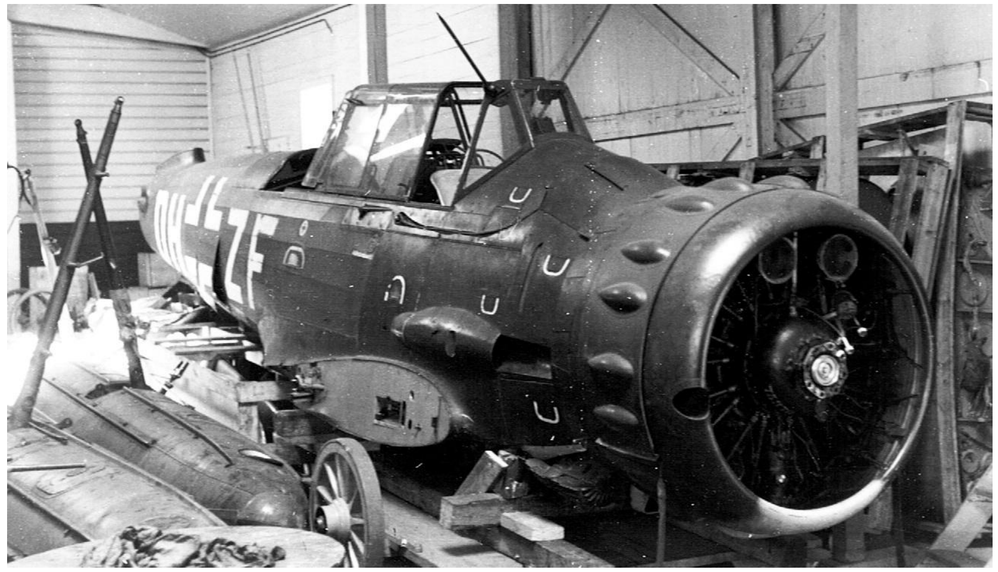
Artillery preserved in Canada 6: Québec, Québec City, la Citadel

Artillery preserved in Canada 6: Québec, Saguenay, Saint Claude, Saint-Jean-sur-Richelieu, Saint-Paul-de-l'Île-aux-Noix, Sayabec, Sept-Îles, Shawville, Shawinigan, Sherbrooke, Sorel, Sorel-Tracy, Saint-Agathe-des-Monts and Saint-Félicien

Artillery preserved in Canada 6: Québec, Saint Hubert, Saint-Hyacinthe, Saint-Jérôme, Sainte-Thérèse and Sutton

Artillery preserved in Canada 6: Québec, Saint-Jean-sur-Richelieu, Collège militaire royal de Saint-Jean

Artillery preserved in Canada 6: Québec, Témiscaming, Terrebonne, Trois-Rivières, DRDC Valcartier, Victoriaville, Warwick, Waterloo and Windsor



Arado Ar 196A-3 (Wk. Nr. 1003), parts stored in a Swedish Air Force Museum. (Björn Atterberg Photo)



Arado Ar 198 reconnaissance (prototype). (Luftwaffe Photo)



Artillery preserved in Canada 6: Québec, Lévis

Artillery preserved in Canada 7: New Brunswick, 5 CDSB Gagetown, Royal Regiment of Canadian Artillery School (RCAS)

Artillery preserved in Canada 7: New Brunswick, 5 CDSB Gagetown, the 4th Artillery Regiment (General Support)

Artillery preserved in Canada 7: New Brunswick, 5 CDSB Gagetown, the Infantry School

Artillery preserved in Canada 7: New Brunswick, 5 CDSB Gagetown, the New Brunswick Military History Museum

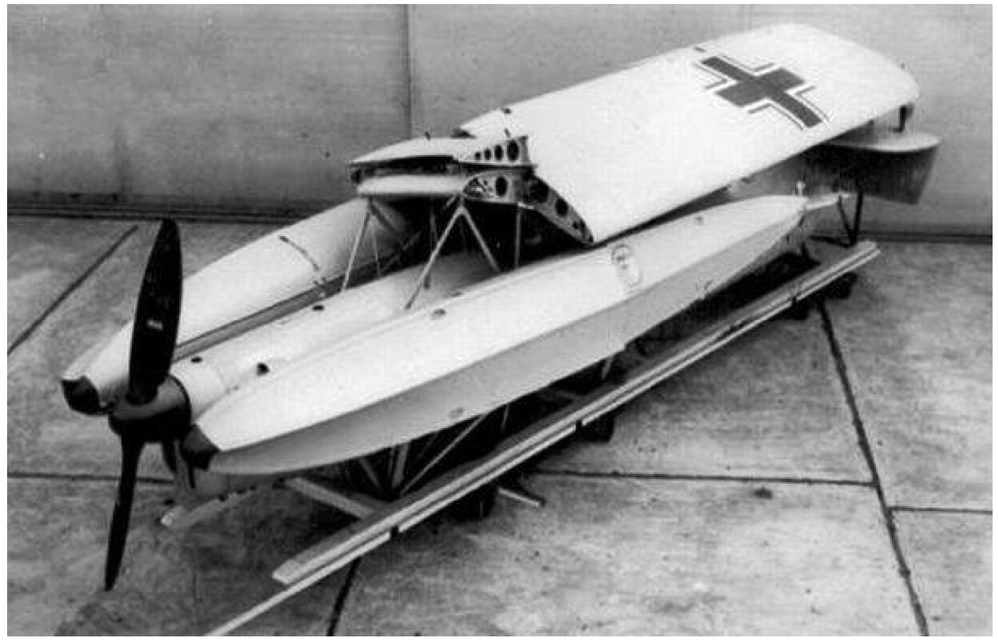
Artillery preserved in Canada 7: New Brunswick, Allison, Bathurst, Campbellton, Cap Pelé, Caraquet, Centreville and Chipman

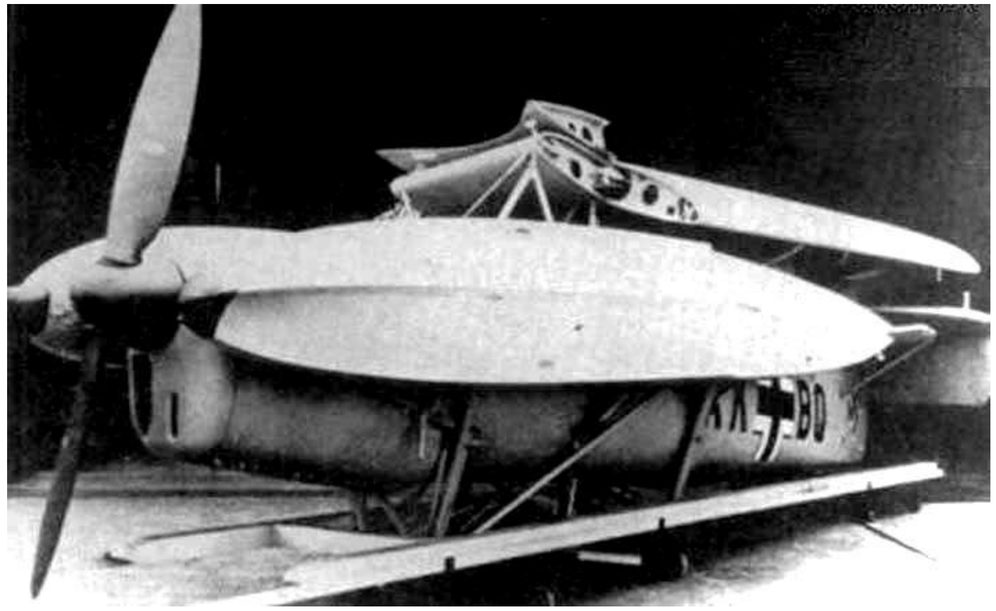
Artillery preserved in Canada 7: New Brunswick, Aulac, Fort Beausejour

Artillery preserved in Canada 7: New Brunswick, Fredericton, Grand Anse, Grand Falls, Hopewell Cape, Kedgwick, Minto, Miramichi, Moncton and New Maryland

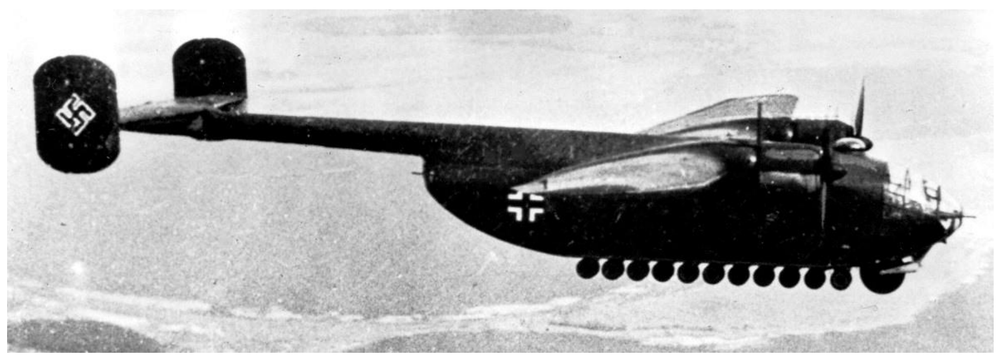
Artillery preserved in Canada 7: New Brunswick, North Head, Oromocto, Perth-Andover, Rogersville and Rothesay

Artillery preserved in Canada 7: New Brunswick, Saint John





Arado Ar 231, folding wing U-boat reconnaissance aircraft (prototype). (Luftwaffe Photos)



Artillery preserved in Canada 7: New Brunswick, St. Andrews by-the-sea, St. George, St. Stephen, Sussex and Woodstock

Artillery Preserved in Canada 8: Prince Edward Island, Artillery preserved in the province of Prince Edward Island, Kensington, Lennox Island, Miscouche, Montague, Mount Stewart, Souris and Tignish

Artillery Preserved in Canada 8: Prince Edward Island, Charlottetown

Artillery Preserved in Canada 8: Prince Edward Island, Charlottetown, Victoria Park, Prince Edward Battery

Artillery Preserved in Canada 8: Prince Edward Island, Summerside

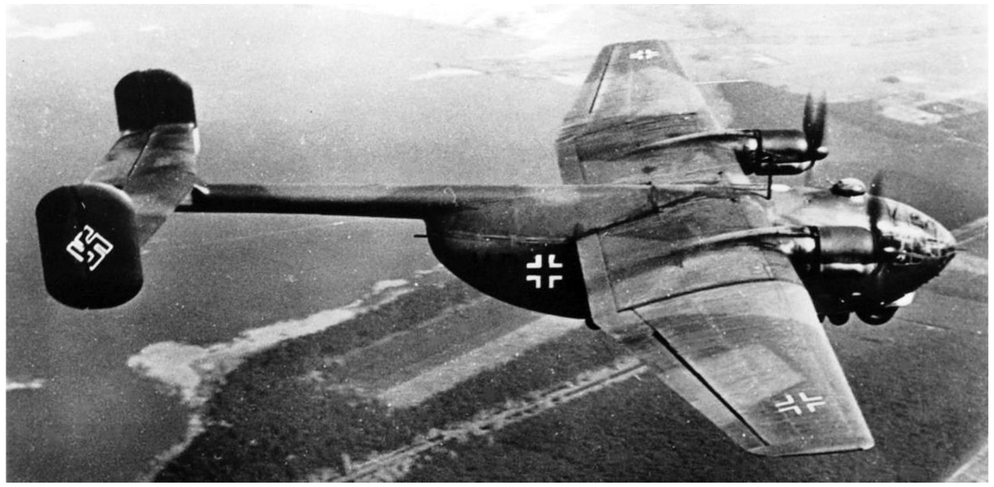
Artillery preserved in Canada 9: Nova Scotia, Annapolis Royal

Artillery preserved in Canada 9: Nova Scotia, Arcadia, Arichat, Bear River, Black River, Bridgewater, Chester, Cheticamp and Clark's Harbour

Artillery preserved in Canada 9: Nova Scotia, Digby

Artillery preserved in Canada 9: Nova Scotia, Fort Lawrence, Fort Point Lighthouse Park, Green Island, Dartmouth and LaHave

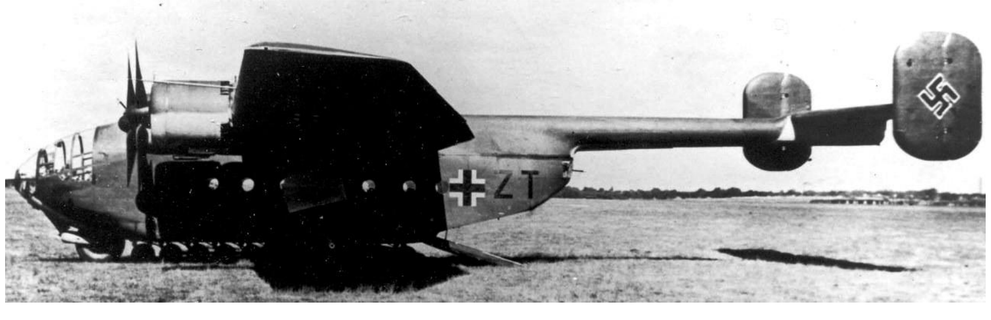
Artillery preserved in Canada 9: Nova Scotia, Halifax







Arado Ar 232 V1 & V2 twin-engine trasnport aircraft prototypes and research aircraft, powered by a pair of 1,193 kW (1,600 hp) BMW 801A/B engines. (Luftwaffe Photos)



Artillery preserved in Canada 9: Nova Scotia, Halifax, Fort George, the Citadel

Artillery preserved in Canada 9: Nova Scotia, Halifax, Maritime Museum of the Atlantic

Artillery preserved in Canada 9: Nova Scotia, Halifax, Naval Museum

Artillery preserved in Canada 9: Nova Scotia, Halifax, Point Pleasant Park

Artillery preserved in Canada 9: Nova Scotia, Halifax, Royal Artillery Park

Artillery preserved in Canada 9: Nova Scotia, Halifax, The Army Museum

Artillery preserved in Canada 9: Nova Scotia, Halifax, York Redoubt

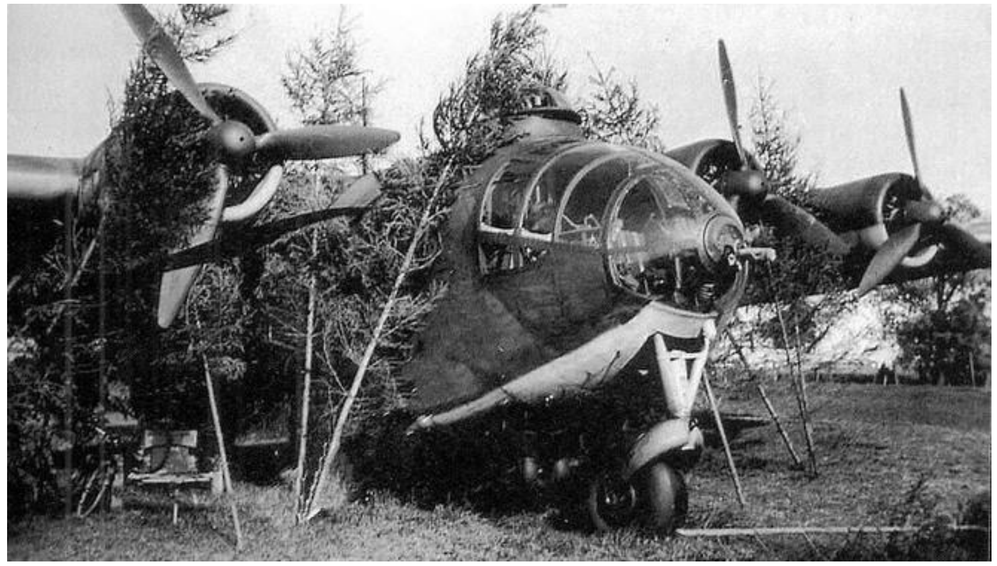
Artillery preserved in Canada 9: Nova Scotia, Liverpool, Louisbourg, New Victoria, Parrsboro, Peggy's Cove, Pictou, Port la Tour, River John and Riverport

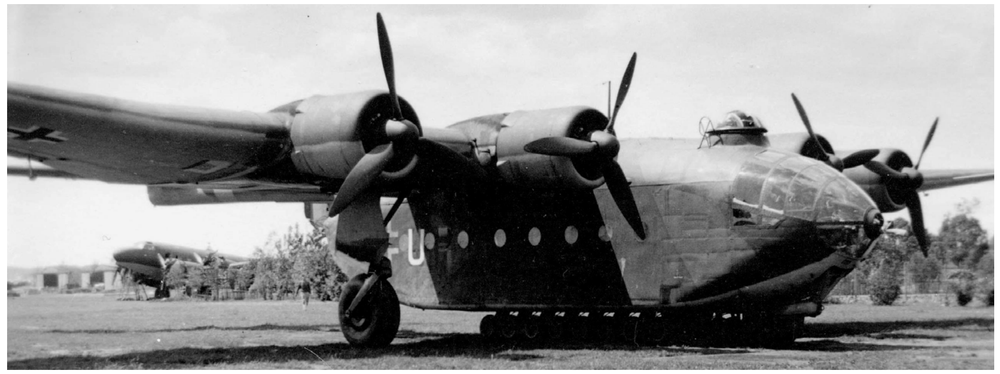
Artillery preserved in Canada 9: Nova Scotia, Lunenburg

Artillery preserved in Canada 9: Nova Scotia, Sambro Island, Shelburne, Sydney, Trenton, Truro, Wallace, Whycocomagh, Windsor, Wolfville and Yarmouth

Artillery preserved in Canada, 10: Newfoundland & Labrador, Argentia, Bay Bulls, Bay Roberts, Bell Island, Bonavista, Botwood and Burgeo







Arado Ar 232B four-engine transports in Luftwaffe service. (Luftwaffe Photos)

Arado Ar 232B-1

The Arado Ar 232 *Tausendfüßler* (Millipede), sometimes also called *Tatzelwurm*, was a Luftwaffe four-engine heavy transport aircraft powered by four 1,200-hp BMW-Bramo 323R-2 radial piston engines. The Ar 232 was the first truly modern cargo aircraft, designed and built in small numbers by the German firm Arado Flugzeugwerke during the Second World War. The design introduced, or brought together, almost all of the features now considered to be “standard” in modern cargo transport aircraft designs, including a box-like fuselage slung beneath a high wing; a rear loading ramp (that had first appeared on the October 1941-flown Junkers Ju 252 tri-motored transport); a high tail for easy access to the hold; and various features for operating from rough fields. Although the *Luftwaffe* was interested in replacing or supplementing its fleet of outdated Junkers Ju 52/3m transports, it had an abundance of types in production at the time and did not purchase large numbers of the Ar 232.

The Ar 232B had a maximum speed of 211-mph, a cruising speed of 180-mph, a service ceiling of 26,245’, and a range of 658 miles. It had a maximum weight of 46,595-lbs at take-off. It had a wingspan of 109’11”, a length of 77’2”, and a height of 18’8”. The “Millipede,” was equipped with a pod-and-boom fuselage with a hydraulically operated rear-loading door.

The most noticeable feature of the Ar 232 was the landing gear. Normal operations from prepared runways used a tricycle gear, but the struts could “break”, or kneel, after landing to place the fuselage closer to the ground and thereby reduce the ramp angle. An additional set of ten smaller, non-retractable twinned wheels per side supported the aircraft once the primary gear was “broken”, or could be used for additional support when landing on soft or rough airfields. The aircraft was intended to be capable of taxiing at low speeds on its small wheels, thus being able to negotiate small obstacles such as ditches up to 1.5 m (5 ft) in width. The appearance of the row of small wheels led to the nickname “millipede”. In flight, the main legs fully retracted into the engine nacelles, while the fixed support wheels remained exposed and the nose wheel only semi-retracted.

Normally operated by a crew of four, the pilot was the only member without two roles. The navigator operated a 13-mm (.51 in) MG 131 in the nose, the radio operator a 20-mm MG 151 cannon in a rotating turret on the roof, and the loadmaster a 13-

Artillery preserved in Canada, 10: Newfoundland & Labrador, Cape Spear, Carbonear, Catalina, Centreville-Wareham-Trinity, Clarenville, Corner Brook, Cupids, Ferryland, Grand Falls-Windsor and Greenspond

Artillery preserved in Canada, 10: Newfoundland & Labrador, Happy Valley, Harbour Buffet, Harbour Grace, Hearts Content, Hearts Delight, La Poile, Mount Pearl, Spaniard's Bay, St. Georges, Stephenville Crossing, Tilting, Trepassey and Trinity

Artillery preserved in Canada, 10: Newfoundland & Labrador, Placentia

Artillery preserved in Canada, 10: Newfoundland & Labrador, St. John's

Artillery preserved in Canada, 11: Yukon Territory, 12: Northwest Territories & 13: Nunavut

Artillery preserved in Canada, 14: MASTER LIST (no Photos)

Artillery preserved in Canada, French Guns

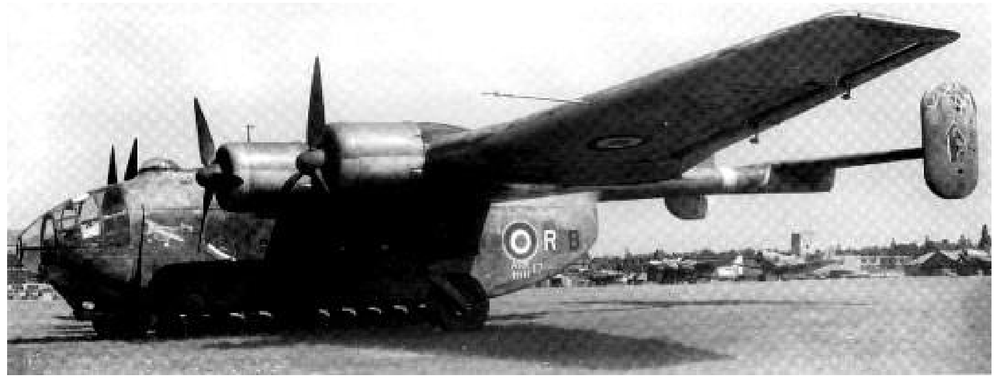
Artillery preserved in Canada, German First World War Trophies

Artillery preserved in Canada, German Second World War Trophies

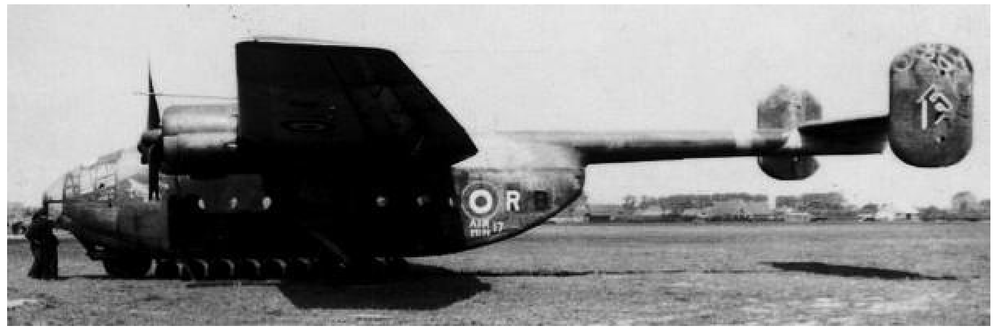
Artillery preserved in Ireland

Artillery preserved in Mexico

mm (.51 in) MG 131 firing rearward from the extreme rear of the cargo bay above the cargo doors.









Artillery preserved in Portugal

Axis Warplane Survivors, German Aircraft (Part I), Arado to Focke-Wulf

Axis Warplane Survivors, German Aircraft (Part II), Focke-Wulf to Junkers

Axis Warplane Survivors, German Aircraft (Part III), Junkers to Messerschmitt

Axis Warplane Survivors, German Aircraft (Part IV), Messerschmitt to Siebel

Canadian Aerospace Artists Association, Harold A. Skaarup Artwork

Canadian Airborne Regiment, 12-plane mass drop on an exercise over CFB Borden, 1988

Canadian Forces Parachute Team, The Sky Hawks, 1977-1979

Canadian Intelligence Corps (C Int C)

Canadian MiG Flights

Canadian Military Motorcycles

Canadian Provost Corps (C Pro C)

Canadian War Trophies

Canadian Warplanes (Books and Illustrations)

Canadian Warplanes 1: The Biplane Era Fighters, Bombers and Patrol Aircraft

Canadian Warplanes 1: The Biplane Era, Armstrong Whitworth Atlas and Siskin fighters



Arado Ar 232B-0, (Wk. Nr. 305002), RAF AM17. (RAF Photos)

Arado Ar 232B-0 (Wk. Nr. 305002) A3+RB, 3./KG 200 (3rd Sqn, 200th Bomb Wing, (Special Operations Wing). The aircraft was surrendered to British forces at Eggebek, Schleswig-Holstein, Germany, in 1945. This aircraft was designated RAF AM17 and pressed into service to ferry spare parts from occupied Europe to Farnborough, often flown by Squadron Leaders McCarthy and Somerville. It was scrapped at RAF Sealand in 1948. One of two B-0s captured by British forces at the end of the war, it was also test flown by Capt (N) Eric "Winkle" Brown, who gave the design excellent marks. The aircraft were part of the Royal Aircraft Establishment's Foreign Aircraft Flight at Farnborough. None of these aircraft have survived. S/L McCarthy, DSO, DFC and Bar, had flown with the RAF's famous Lancaster "Dambusters." After the war he chose to remain in the RCAF, finishing his service on Canadair CP-107 Argus ASW aircraft at Greenwood, Nova Scotia, in 1968.





Arado Ar 234 and Junkers Ju 88G in a bombed out hangar, Manching, Bavaria, Germany, May 1945. (USAAF Photos)

Canadian Warplanes 1: The Biplane Era, Boeing Aircraft of Canada (Blackburn) Shark

Canadian Warplanes 1: The Biplane Era, Bristol F.2B Fighter

Canadian Warplanes 1: The Biplane Era, Canadian Car & Foundry (Grumman) Goblin

Canadian Warplanes 1: The Biplane Era, Canadian Vickers (Supermarine) Stranraer

Canadian Warplanes 1: The Biplane Era, Fairey Swordfish

Canadian Warplanes 1: The Biplane Era, Felixstow F.3 Flying Boats

Canadian Warplanes 1: The Biplane Era, Fokker D.VII War Prizes

Canadian Warplanes 1: The Biplane Era, Hawker Tomtit, Hawker Fury, Hawker Hart, Hawker Audax and Hawker Hind

Canadian Warplanes 1: The Biplane Era, Nieuport Bebe, Nieuport 12 and Nieuport 17 fighters

Canadian Warplanes 1: The Biplane Era, Royal Aircraft Factory B.E.2c, F.E.2b, R.E.8 and S.E.5a fighters

Canadian Warplanes 1: The Biplane Era, Sopwith fightersSopwith Camel, Dolphin, 1-1/2 Strutter, Pup, Snipe and Triplane

Canadian Warplanes 1: The Biplane Era, Westland Wapiti



Arado Ar 234B V9 prototype seen with a 1,000-kilogram bomb on 15 Mar 1944. (Note: the aircraft lacks a cockpit periscope). (Luftwaffe Photo)

Arado Ar 234B

The Arado Ar 234B-2 Blitz was the world's first operational jet-powered bomber, built by the German Arado company in the closing stages of the Second World War. It was powered by two Junkers Jumo 004B-1 axial-low turbojets, each with 1,984-lb thrust. The Ar 234 was produced in very limited numbers and was used almost entirely in the reconnaissance role, but in its few uses as a bomber it proved to be nearly impossible to intercept. It was the last *Luftwaffe* aircraft to fly over England during the war, in April 1945.

The Ar 234 was commonly known as *Blitz* (lightning), although this name refers only to the B-2 bomber variant] and it is not clear whether it derived from the informal term *Blitz-Bomber* (roughly, "very fast bomber") or was ever formally applied. The alternate name *Hecht* ("pike") is derived from one of the units equipped with this aircraft, *Sonderkommando Hecht*.

The Blitz had a maximum speed of 461-mph, a cruising speed of 435-mph, a service ceiling of 32,810, and a range of 967 miles with a 1,100-lb bomb load. The aircraft weighed 11,464 lbs empty and 21,605 lbs with maximum bomb load. It has a wing span of 46'3", a length of 41'5" and a height of 14'1". It was armed with two fixed aft-firing 20-mm Mauser MG 151/20 cannon with 200 rpg.

In July 1944 the fifth and seventh prototypes of the Ar 234 were subjected to operational evaluation in the reconnaissance role by 1/Versuchsverband Oberbefehishaber der Luftwaffe at Juvincourt, near Reims. Fitted with Walter RATO equipment, they defied interception during numerous sorties over Allied territory and were joined later by some Ar 234B-ls which, in small detachments, equipped experimental reconnaissance units designated Sonderkommandos Gotz, Hecht, Sperling and Sommer. Two other units, 1.(F)/33 and 1.(F)/100, were still operational at the war's end. The bomber version first became operational with the Stabstaffel of KG 76, deployed during the Ardennes offensive, but at that stage of the war the number of sorties that could be mounted was limited severely by fuel shortage. Among the most noted bomber operations were attempts to destroy the Ludendorff Bridge over the Rhine at Remagen, which was held by US troops. For 10 days from 7 March 1945 almost continuous attacks were made on this target until finally the bridge collapsed, but within two more weeks bomber operations had virtually come to an end for lack of fuel. The Ar 234 was also flown by Kommando Bonow, an experimental night-fighter unit which operated until the end of the war under the control of Luftflotte Reich.

Total construction of the Arado Ar 234 amounted to 274 aircraft, of which 30 were prototypes and 244 production aircraft. A total of 210 Ar-234Bs and 14 Ar-234Cs were delivered to the Luftwaffe, but with Germany in chaos, only a handful ever got into combat. A final inventory taken on 10 April 1945 listed 38 in service, including 12 bombers, 24 reconnaissance aircraft, and 2 night fighters.

On 24 February, an Ar-234B suffered a flameout in one of its engines and was forced down to a hard landing by an American Republic P-47 Thunderbolt fighter near the village of Segelsdorf. The jet was captured by the advancing Allies the next day. It was the first example of the type to fall into Allied hands largely intact. Ar 234s "continued to fight in a scattered and ineffective fashion until Germany surrendered on 8 May 1945. Some were shot down in air combat, destroyed by flak, sometimes their own, or bounced by Allied fighters when they came in to land. Others performed their missions and then fled too fast for enemy fighters to follow, to land and then wait for scarce fuel to be found so they could fly other missions."



Arado Ar 234B-2, (Wk. Nr. 140173), F1+MT, III./KG76, brought down near Segelsdorf, Germany on 24 Feb 1945. This was the first of its type to be captured by the Allies. Fate unknown. (USAAF Photo)

Canadian Warplanes 2: The Biplane Era Trainers, Transports and Utility Aircraft
Canadian Warplanes 2: The Biplane Era, Aerial Experimental Association (AEA) Silver Dart, June Bug and Baddeck
Canadian Warplanes 2: The Biplane Era, Avro biplanes
Canadian Warplanes 2: The Biplane Era, Canadian Vickers floatplanes and seaplanes
Canadian Warplanes 2: The Biplane Era, Curtiss biplanes
Canadian Warplanes 2: The Biplane Era, de Havilland biplanes
Canadian Warplanes 2: The Biplane Era, Fairchild Trainers, Transports and Utility Aircraft
Canadian Warplanes 2: The Biplane Era, Fleet Fawn and Fleet Finch trainers
Canadian Warplanes 3: The Second World War Fighters, Bombers and Patrol Aircraft
Canadian Warplanes 3: The Second World War, and post-War, Avro Anson trainers
Canadian Warplanes 3: The Second World War, and post-War, Avro Lancaster
Canadian Warplanes 3: The Second World War, and post-war, Beechcraft CT-128 Expeditor





Arado Ar 234B-1 (Wk. Nr. 140476), 8H+HH, captured at Grove, Denmark. This aircraft was designated RAF AM26, later VK877. It was scrapped at Farnborough. (RAF Photos)

Arado Ar 234B-2 (Wk. Nr. 140466), captured at Grove, Denmark. This aircraft was designated RAF AM24. It crashed at Farnborough on 27 Aug 1945.

Arado Ar 234B (Wk. Nr. 140608), captured at Grove, Denmark. This aircraft was designated RAF AM25, later VK880. It was scrapped at Brize Norton in 1948.

Arado Ar 234B (Wk. Nr. 140113), captured at Schlesweg. This aircraft was designated RAF AM54, later VH530. It was scrapped at Brize Norton in 1948.

Arado Ar 234B (Wk. Nr. 140356), captured at Stavanger, Norway. Designated RAF AM226, this aircraft was scrapped at Farnboough, England.

Arado Ar 234B (Wk. Nr. 140141), captured at Stavanger, Norway. Designated RAF AM227, this aircraft was scrapped at Brize Norton, England.



Arado Ar 234B (Wk. Nr. 140493), captured at Stavanger, Norway. Designated RAF AM228, this aircraft was scrapped at Brize Norton, England. (RAF Photo)

Arado Ar 234B (Wk. Nr. 140581), captured at Stavanger, Norway. Designated RAF AM229, this aircraft was scrapped at Brize Norton, England.

Arado Ar 234B (Wk. Nr. 140107), captured at Schleswig. Shipped to Oxfordness, England this aircraft was used as a ballistic target at Oxfordness, England.

Canadian Warplanes 3: The Second World War, and post-War, Boeing Canada PB2B-1 Catalina and Canadian Vickers PBV-1A Canso A

Canadian Warplanes 3: The Second World War, and post-war, Consolidated B-24 Liberator

Canadian Warplanes 3: The Second World War, and post-War, Hawker Hurricane

Canadian Warplanes 3: The Second World War, and post-War, North American B-25 Mitchell

Canadian Warplanes 3: The Second World War, and post-War, North American Harvard

Canadian Warplanes 3: The Second World War, and post-War, North American P-51 Mustang

Canadian Warplanes 3: The Second World War, and post-War, Supermarine Spitfire

Canadian Warplanes 3: The Second World War, Bristol (Fairchild) Bolingbroke

Canadian Warplanes 3: The Second World War, Bristol Beaufort and Bristol Beaufighter

Canadian Warplanes 3: The Second World War, Curtiss P-40 Kittyhawk

Canadian Warplanes 3: The Second World War, de Havilland DH.98 Mosquito

Canadian Warplanes 3: The Second World War,



Arado Ar 234B, (Wk. Nr. 140581) captured at Sola Airfield, Stavanger, Norway, still wearing Luftwaffe markings, being examined by RAF personnel. (RAF Photo)





Arado Ar 234B, (Wk. Nr. 140581) 8H+CH captured at Sola Airfield, Stavanger, Norway, being ground run. The aircraft wears RAF markings and was one of ten Ar 234Bs surrendered at Stavanger, Norway. Two of these went to the USAAF and one survives in the Steven F. Udvar-Hazy Museum, Chantilly, Virginia. Four of the remaining Ar 234s were flown to Farnborough. (RAF Photos)

Arado Ar 234B, (Wk. Nr. 140486), captured at Grove, Denmark. Designated RAF USA 7, this aircraft may have been sent to France.

Douglas Boston

Canadian Warplanes 3: The Second World War, Douglas Digby

Canadian Warplanes 3: The Second World War, Handley Page Halifax

Canadian Warplanes 3: The Second World War, Handley Page Hampden

Canadian Warplanes 3: The Second World War, Hawker Tempest and Hawker Typhoon

Canadian Warplanes 3: The Second World War, Lockheed Hudson, Lodestar, Vega and Ventura

Canadian Warplanes 3: The Second World War, Martin Baltimore and Martin Maryland bombers

Canadian Warplanes 3: The Second World War, Short Stirling

Canadian Warplanes 3: The Second World War, Vickers Wellington

Canadian Warplanes 3: The Second World War, Westland Lysander

Canadian Warplanes 3: The Second World War, Westland Whirlwind

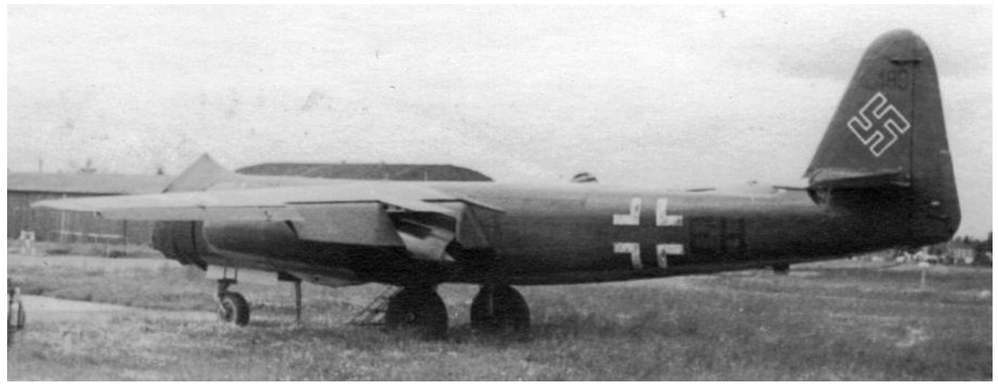
Canadian Warplanes 4: The Second World War Trainers, Transports and Utility Aircraft

Canadian Warplanes 4: The Second World War, Airspeed and WACO Gliders

Canadian Warplanes 4: The Second World War, Airspeed Oxford



Arado Ar 234B, (Wk. Nr. 140311), USA 40, FE-1011, Wright Field, Oct 1945. (USAAF Photo)









Canadian Warplanes 4: The Second World War, and post-War, Douglas Dakota

Canadian Warplanes 4: The Second World War, and post-War, Noordyn Norseman

Canadian Warplanes 4: The Second World War, Boeing B-17 Flying Fortress

Canadian Warplanes 4: The Second World War, Brewster SB2A Bermuda

Canadian Warplanes 4: The Second World War, Canadian Vickers (Northrop) Delta

Canadian Warplanes 4: The Second World War, Cessna Crane

Canadian Warplanes 4: The Second World War, Fairchild Cornell

Canadian Warplanes 4: The Second World War, Fairey Battle

Canadian Warplanes 4: The Second World War, Fleet Fort

Canadian Warplanes 4: The Second World War, Grumman Goose

Canadian Warplanes 4: The Second World War, Northrop Nomad

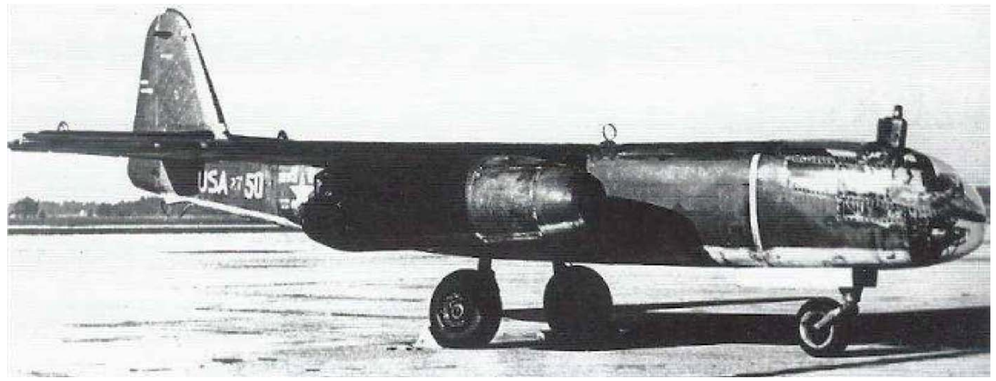
Canadian Warplanes 5: The Post War Piston Era

Canadian Warplanes 5: The Post War Piston Era, Auster AOP.6

Canadian Warplanes 5: The Post War Piston Era, Bristol 170 Freighter



Arado Ar 234B-1, (Wk. Nr. 140489), 8H+EH, Watson's Whizzers 202, USA 5, USN (Bu No. 121445), *Jane I*. This aircraft was scrapped at the Naval Air Test Center (NATC) Patuxent River, Maryland. (USN Photos)









Canadian Warplanes 5: The Post War Piston Era, Canadair CC-106 Yukon

Canadian Warplanes 5: The Post War Piston Era, Canadair CL-2 North Star and Canadair C-5 North Star transports

Canadian Warplanes 5: The Post War Piston Era, Canadair CP-107 Argus

Canadian Warplanes 5: The Post War Piston Era, Cessna L-19 Bird Dog and Cessna L-182 Skylane

Canadian Warplanes 5: The Post War Piston Era, Consolidated RY-3 Privateer

Canadian Warplanes 5: The Post War Piston Era, de Havilland Canada (Grumman) CP-121 Tracker

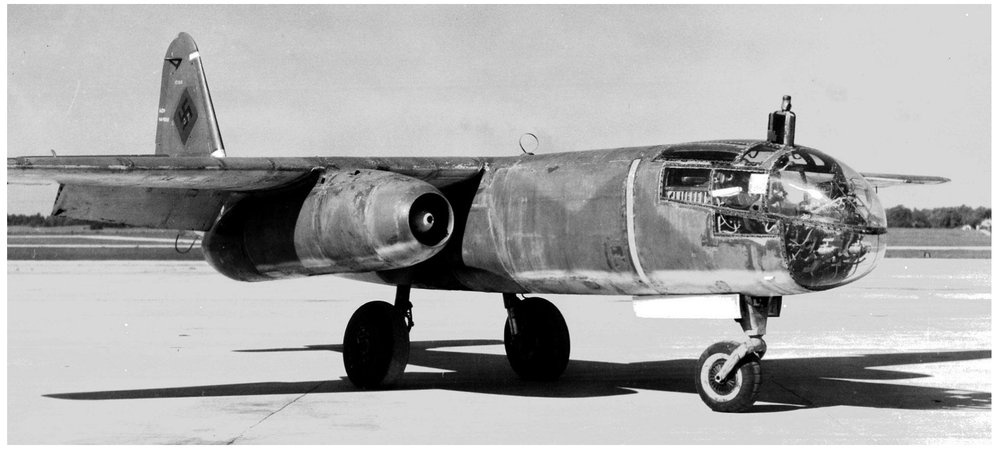
Canadian Warplanes 5: The Post War Piston Era, de Havilland CC-108 Caribou, CC-115 Buffalo, CC-138 Twin Otter, CC132 Dash-7, CC-142 and CT-142 Dash-8

Canadian Warplanes 5: The Post War Piston Era, de Havilland CC-123 Otter

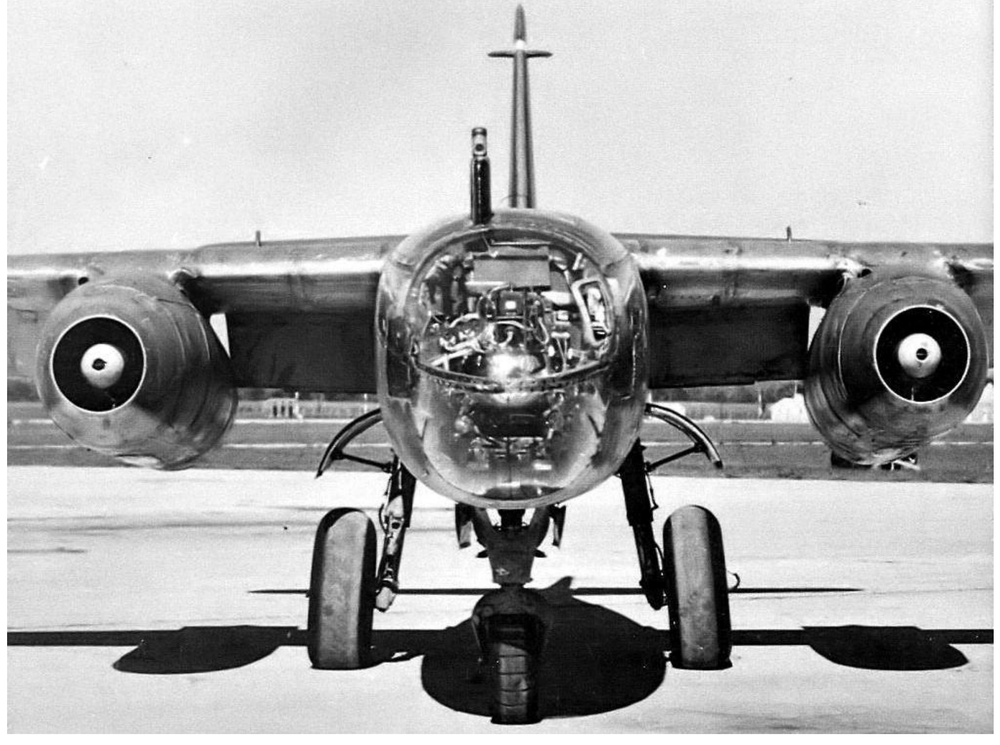
Canadian Warplanes 5: The Post War Piston Era, Fairchild C-119 Flying Boxcar

Canadian Warplanes 5: The Post War Piston Era, Fairey Firefly

Canadian Warplanes 5: The Post War Piston Era, General Motors (Grumman) TBM-3E Avenger







Canadian Warplanes 5: The Post War Piston Era, Hawker Sea Fury

Canadian Warplanes 5: The Post War Piston Era, Lockheed CC-130 Hercules

Canadian Warplanes 5: The Post War Piston Era, Lockheed CP-122 Neptune

Canadian Warplanes 5: The Post War Piston Era, NRC Tailless Glider

Canadian Warplanes 5: The Post War Piston Era, Supermarine Seafire

Canadian Warplanes 5: The Post-War Piston Era, Grumman CSR-110 Albatross

Canadian Warplanes 6, Jets

Canadian Warplanes 6, Jets, Airbus CC-150 Polaris

Canadian Warplanes 6, Jets, Avro C102 Jetliner

Canadian Warplanes 6, Jets, Avro CF-100 Canuck

Canadian Warplanes 6, Jets, Avro CF-105 Arrow

Canadian Warplanes 6, Jets, Boeing CC-137 Husky

Canadian Warplanes 6, Jets, Boeing CC-177 Globemaster III

Canadian Warplanes 6, Jets, Bombardier CC-144 Challenger

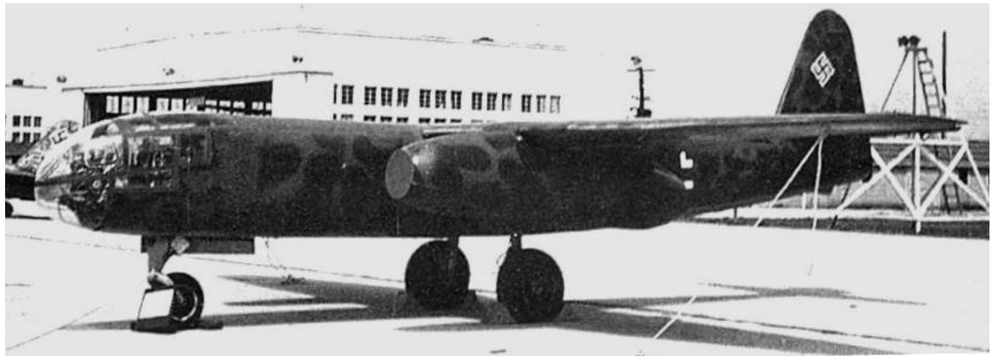
Canadian Warplanes 6, Jets, British Aerospace (HS) CT-155 Hawk

Canadian Warplanes 6, Jets, Canadair CF-104 Starfighter

Canadian Warplanes 6, Jets, Canadair CF-116







Arado Ar 234B-2, (Wk. Nr. 140312), coded F1+DR, allocated to the USA by the RAF as USA 50, redesignated FE-1010, later T2-1010, Wright Field, Ohio, ca 1945. This aircraft is now on display in the Steven F. Udvar-Hazy Center. This Ar 234 B-2 was F1+DR, a detail not known when it was restored and painted as F1+GS. (USAAF Photos)

After the war ended, a race began to collect advanced technology. Ar 234s were scattered all over Western Europe, and the British obtained about a dozen of them. The Soviets apparently only recovered one. For whatever reasons, the Ar 234 had been primarily used in the west.

The Ar 234C was equipped with four BMW 003A engines to free up Junkers Jumo 004s from use by the Me 262. The utilization of four engines improved overall thrust, especially in take-off and climb-to-altitude performance. 15 prototypes of the AR 234C were completed before the end of the conflict. Although Hauptmann Dieter Lukesch was preparing to form an operational test squadron, the Ar 234C was not developed in time to participate in actual combat operations.

Four Ar 234s along with an assortment of other advanced Luftwaffe aircraft and shipped to the USA on the “jeep” carrier HMS *Reaper*. Three were given to the US Army Air Force and one to the US Navy, though the Navy’s aircraft turned out to be in permanently unflyable condition. One of the three obtained by the USAAF, (Wk. Nr. 140312), was put through intensive tests at Wright-Patterson Air Force Base, and ultimately handed on to the Smithsonian Institution’s National Air & Space Museum, where it is now prominently on display.



Freedom Fighter

Canadian Warplanes 6, Jets, Canadair CL-13 Sabre

Canadian Warplanes 6, Jets, Canadair CL-52 Stratojet (Boeing B-47B)

Canadian Warplanes 6, Jets, Canadair CT-114 Tutor

Canadian Warplanes 6, Jets, Canadair CT-133A Silver Star

Canadian Warplanes 6, Jets, Dassault CC-117 Falcon 20C

Canadian Warplanes 6, Jets, de Havilland DH.100 Vampire

Canadian Warplanes 6, Jets, de Havilland DH.106 Comet

Canadian Warplanes 6, Jets, Gloster Meteor

Canadian Warplanes 6, Jets, McDonnell CF-101 Voodoo

Canadian Warplanes 6, Jets, McDonnell Douglas CF-188 Hornet

Canadian Warplanes 6, Jets, McDonnell F2H-3 Banshee

Canadian Warplanes 7: Helicopters

Canadian Warplanes 7: Helicopters, AgustaWestland CH-149 Cormorant

Canadian Warplanes 7: Helicopters, Bell CH-118 Iroquois

Canadian Warplanes 7: Helicopters, Bell CH-135 Twin Huey





Arado Ar 234B-2, (Wk. Nr. 140312), USA 50, FE-1010, T2-1010, ex-USN (BuNo. 140312), on display in the Steven F. Udvar-Hazy Center, Virginia. This is the only surviving Ar 234. The aircraft is an Ar 234B-2 bomber variant and was one of nine Ar 234s surrendered to British forces at Sola Airfield near Stavanger, Norway. The aircraft had been operating with *9. Staffel* III./*Kampfgeschwader 76* (later reorganised as *Einsatzstaffel*) during the final weeks of the war, having operated previously with the 8th squadron, carrying the full-four-character *Geschwaderkennung* military code of "F1+GS" on the fuselage sides. (Kogo Photos)

This Ar 234 and three others were collected by the famous "Watson's Whizzers" of the USAAF to be shipped back to the United States for flight testing. Two aircraft were given freely but a further two had been traded to Watson by Eric "Winkle" Brown (test pilot and CO of the Enemy Aircraft Flight at the RAE) in exchange for an interview with Hermann Göring who was then being held by the Americans.

The aircraft was flown from Sola to Cherbourg, France on 24 June 1945 where it joined 34 other advanced German aircraft being shipped back to the USA aboard the British aircraft carrier HMS *Reaper*. HMS *Reaper* departed from Cherbourg on 20 July, arriving at Newark, New Jersey eight days later. Upon arrival two of the Ar 234s were reassembled including Wk. Nr. 140312, and flown by USAAF pilots to Freeman Field, Seymour, Indiana, for testing and evaluation. Wk. Nr. 140312 was assigned the foreign equipment number FE-1010. The fate of the second Ar 234 flown to Freeman Field remains a mystery. One of the remaining two was reassembled by the United States Navy at Naval Air Station Patuxent River, Maryland, for testing, but was found to be in unflyable condition and was scrapped.

After receiving new engines, radio and oxygen equipment, Wk. Nr. 140312 was transferred to Wright Field near Dayton, Ohio and delivered to the Accelerated Service Test Maintenance Squadron (ASTMS) of the Flight Test Division in July 1946. Flight testing was completed on 16 October 1946 though the aircraft remained at Wright Field until 1947. It was then transferred to Orchard Place Airport in Park Ridge, Illinois, and remained there until 1 May 1949 when it, and several other aircraft stored at the airport were transferred to the Smithsonian Institution. During the early 1950s the Ar 234 was moved to the Smithsonian's Paul Garber Restoration Facility at Suitland, Maryland for storage and eventual restoration.

The Smithsonian began restoration of Wk., Nr. 140312 in 1984 and completed it in February 1989. All paint had been stripped from the aircraft before the Smithsonian received it, so the aircraft was painted with the markings of an aircraft of 8./KG 76, the first operational unit to fly the "Blitz". The restored aircraft was first displayed at the Smithsonian's main museum building in downtown Washington D.C. in 1993 as part of a display titled "Wonder Weapon? The Arado Ar 234". In 2005 it became one of the first aircraft moved to the new Steven F. Udvar-Hazy Center near Dulles International Airport.

Canadian Warplanes 7: Helicopters, Bell CH-136 Kiowa

Canadian Warplanes 7: Helicopters, Bell CH-139 Jet Ranger

Canadian Warplanes 7: Helicopters, Bell CH-146 Griffon

Canadian Warplanes 7: Helicopters, Bell H-13B Sioux and Bell HTL-6 Sioux

Canadian Warplanes 7: Helicopters, Boeing Vertol CH-113 Voyageur and CH-113A Labrador

Canadian Warplanes 7: Helicopters, Boeing Vertol CH-147 Chinook

Canadian Warplanes 7: Helicopters, Canadair CL-84 Dynavert

Canadian Warplanes 7: Helicopters, Hiller CH-112 Nomad

Canadian Warplanes 7: Helicopters, Piasecki HUP-3 Retriever

Canadian Warplanes 7: Helicopters, Sikorsky CH-124 Sea King

Canadian Warplanes 7: Helicopters, Sikorsky CH-126 Choctaw

Canadian Warplanes 7: Helicopters, Sikorsky CH-148 Cyclone

Canadian Warplanes 7: Helicopters, Sikorsky H-19 and HO4S-3 Sea Horse

Canadian Warplanes 7: Helicopters, Sikorsky H-5 Dragonfly

Canadian Warplanes 7: Helicopters, Vertol Canada

Today, Wk. Nr. 140312 is displayed next to the last surviving Dornier Do 335 Pfeil, an aircraft that had accompanied it on its voyage across the Atlantic Ocean aboard HMS *Reaper* over 70 years earlier.

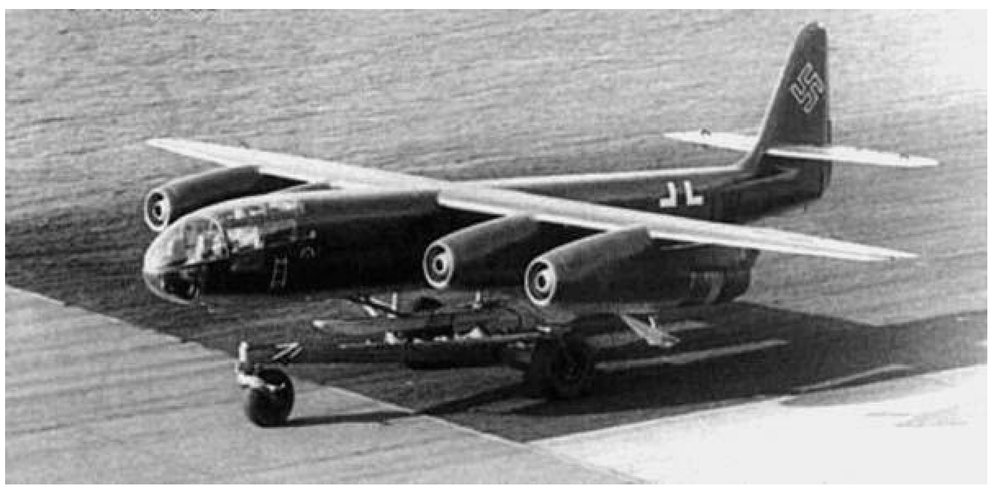
This aircraft is displayed with a pair of Hellmuth Walter designed, liquid-fueled RATO units mounted under its wings. These RATO units may be the only surviving examples to be mounted on an aircraft.



Arado Ar 234B-2, (Wk. Nr. 140355) captured by the Soviet Union during the first stage of test flights at Puetnitz. One aircraft Arado-234C and two Heinkel-162 were also shipped to Moscow for testing. (Soviet Air Force Photo)

The Soviet Air Force tested Arado Ar 234, (Wk. Nr. 140355) in Germany in March 1945. This aircraft's landing gear, wing, and some primary members of the fuselage had been damaged during a forced landing. The aircraft was rebuilt at a repair plant in the town of Ribnitz, but one of its Junkers engines malfunctioned during its first flight in June 1945. An Air Forces Scientific Research Institute brigade again repaired the aircraft and performed the first stage of flight-testing in Germany. In January-February 1946, Major A G. Kubyshkin flew five Arado sorties. During that time, two engines malfunctioned. On 26 January, a port engine failed during climb-out and, exactly one month later, the starboard engine flamed out during the takeoff roll. Fires occurred both times, but the aircraft were rescued. Having had the opportunity to compare the German Jets, Soviet Engineer-Lieutenant Colonel A. G. Kochetkov thought that the Arado was more difficult to handle than the Me 262.





Arado Ar 234C four-engine variant. The Soviet Union shipped one Arado-234C and two Heinkel-162 to Moscow for testing. (Luftwaffe Photos)

CH-125 and CH-127 Workhorse

Canadian Warplanes 8: Boeing CIM 10B Bomarc surface-to-air missile

Castles and Fortresses

Congreve Rockets - Canadian Connections

Dream Sayer: New Visions (pending)

Dream Seeker: Old Wisdoms Revisited

Dream Seer: Old Wisdoms

Estabrooks, Frederick W. Canadian Provost Corps

Estabrooks, Walter R. Whiz Bangs and Woolly Bears

German Aggregat A-4 Vergeltungswaffe-2 (V-2) Rockets, preserved

German Warplanes flown by the Luftstreitkräfte 1914-1918, preserved

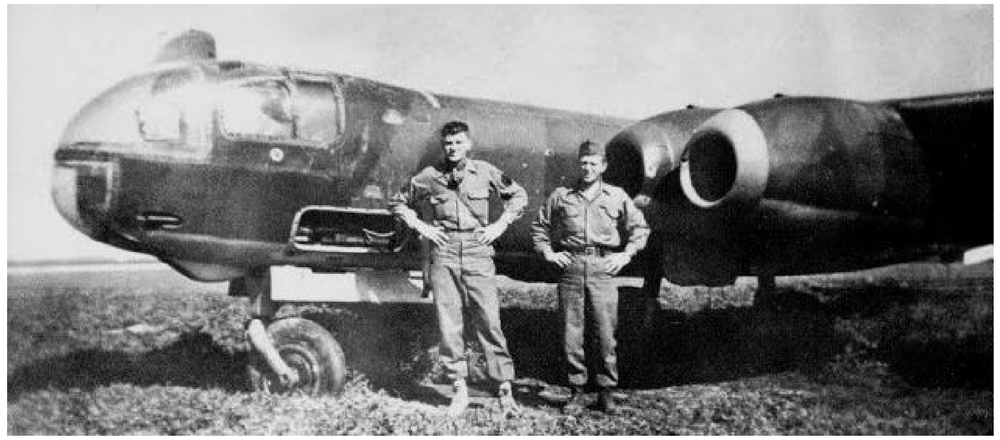
German Warplanes flown by the Luftwaffe 1939-1945, Arado to Dornier

German Warplanes flown by the Luftwaffe 1939-1945, Fieseler to Focke Achgelis

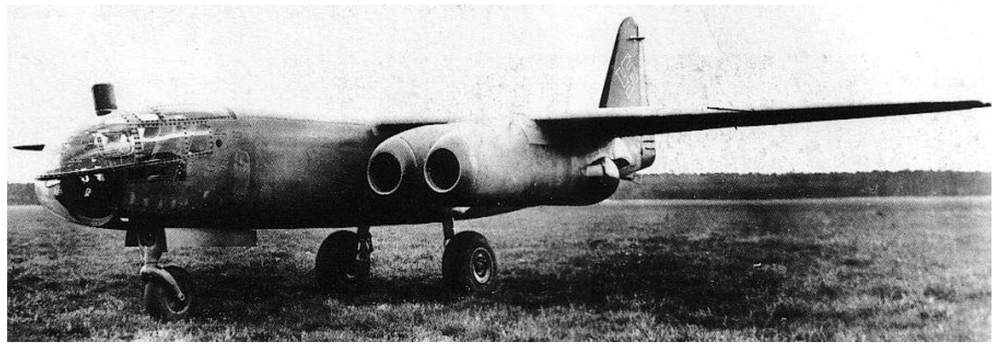
German Warplanes flown by the Luftwaffe 1939-1945, Focke-Wulf

German Warplanes flown by the Luftwaffe 1939-1945, Gotha to Junkers

German Warplanes flown by the Luftwaffe 1939-1945, Klemm to Siebel









Arado Ar-234 V13 with BMW-003 engines, four-engine variants. (USAAF Photos)

German Warplanes flown by the Luftwaffe 1939-1945, Messerschmitt

Ironsides, Canadian Armoured Fighting Vehicle Museums and Monuments

Italian Warplanes of the Second World War (Regia Aeronautica), Aeronautica to Douglas

Italian Warplanes of the Second World War (Regia Aeronautica), Fiat to Macchi

Italian Warplanes of the Second World War (Regia Aeronautica), Messerschmitt to Savoia-Marchetti

Japanese Warplanes of the Second World War, Aichi to Kawanishi

Japanese Warplanes of the Second World War, Mitsubishi

Japanese Warplanes of the Second World War, Nakajima to Yokosuka

Japanese Weapons and Artifacts of the Second World War preserved in Canada

Kite Balloons over Canadians during the First World War

Labyrinth and Rock Wall, Fredericton

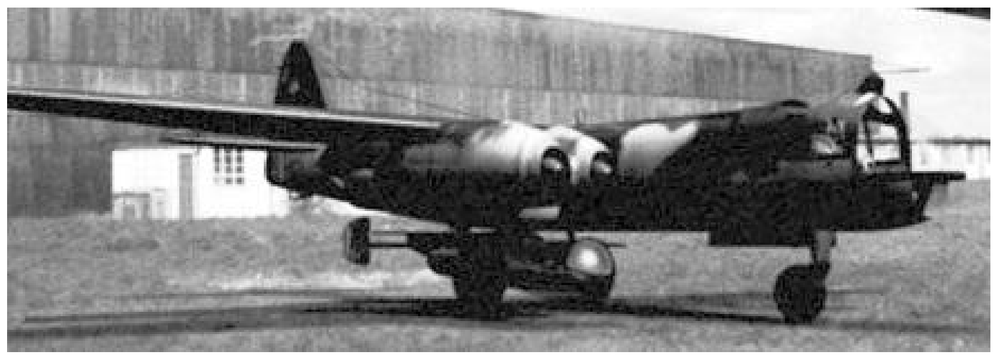
Mobile Support Equipment, RCAF

New Brunswick - the picture province

New Brunswick Military History Museums

New Brunswick Military Units, The 8th Canadian Hussars (Princess Louise's)





Arado E.381 *Kleinstjäger (*smallest fighter), a proposed parasite fighter aircraft. Conceived by *Arado Flugzeugwerke* in December 1944, the E.381 was to have been carried aloft by and launched from an Arado Ar 234 "mother" aircraft. It would then have activated its rocket engine, which would have propelled it to attack Allied bombers. Development was cancelled due to lack of funds and official support. There were three proposed variants; each had fuel capacity for only two target runs, after which the pilot would have been required to glide without power to a landing on under-belly skids. To survive close pursuits, the E.381 was designed with the narrowest frontal cross section possible to increase its chances of surviving shots from the front. This also forced the pilot to lie in a prone position. The cross-section was 0.45 square meters (4.8 sq ft), or approximately a quarter of the cross section of the Messerschmitt Bf 109. (Luftwaffe Photos)



Arado E.555, (model) bomber proposed by the Arado company in response to the *Amerika* Bomber project. This was an initiative of the *Reichsluftfahrtministerium* (Germany Air Ministry), RLM, to obtain a long-range bomber for the *Luftwaffe* that would be capable of striking the continental United States from Germany. Requests for designs were made to the major German aircraft manufacturers early in the Second World War, long before the US had entered the war. There were a several different configurations of the design considered, the most striking being the E.555-1. This was a six-jet, angular flying wing design, with remotely operated turrets, and capable of carrying a large payload. All of these projects were deemed too expensive and plans for development were abandoned in late 1944. (Juergen Kleuser Photo)

Arado E.560, a series of multi-enginedmedium-range tactical bombers projected during the Second World War. The E.560 designs were part of the propaganda-based *Wunderwaffe*concept. None of the projected bombers were built as the project took place near the end of the Third Reich and was terminated by the end of the war in Europe. The Arado E.560 designs were a development based on the Arado 234 and they share some characteristics with that plane. Only five designs of Ar E.560 variants have survived; the remaining are unknown. Except for two variants which were propeller-driven aircraft, the other three E.560 designs were to be powered by turbojets. The Ar E.560 2 was a four-engined bomber project powered by

New Brunswick Military Units, The Carleton and York Regiment

New Brunswick Military Units, The New Brunswick Rangers

New Brunswick Military Units, The North Shore (New Brunswick) Regiment

New Brunswick Military Units, The Royal New Brunswick Regiment

New Brunswick Military Units, The Royal Rifles of Canada (New Brunswick elements)

Nursing Sisters, Canada

Out of Darkness - Light, A History of Canadian Military Intelligence, Volume 1, Pre-Confederation to 1982

Out of Darkness - Light, A History of Canadian Military Intelligence, Volume 2, 1983 to 1997

Out of Darkness - Light, A History of Canadian Military Intelligence, Volume 3, 1998 to 2005

Out of Darkness - Light, A History of Canadian Military Intelligence, Volume 4, 2006-present (pending)

RAF, No. 125 (Newfoundland) Squadron

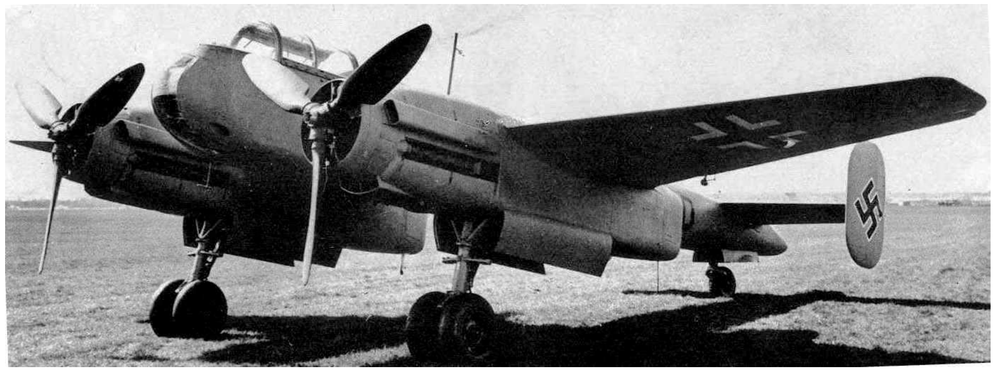
RCAF War Prize Flights, German and Japanese Warbird Survivors

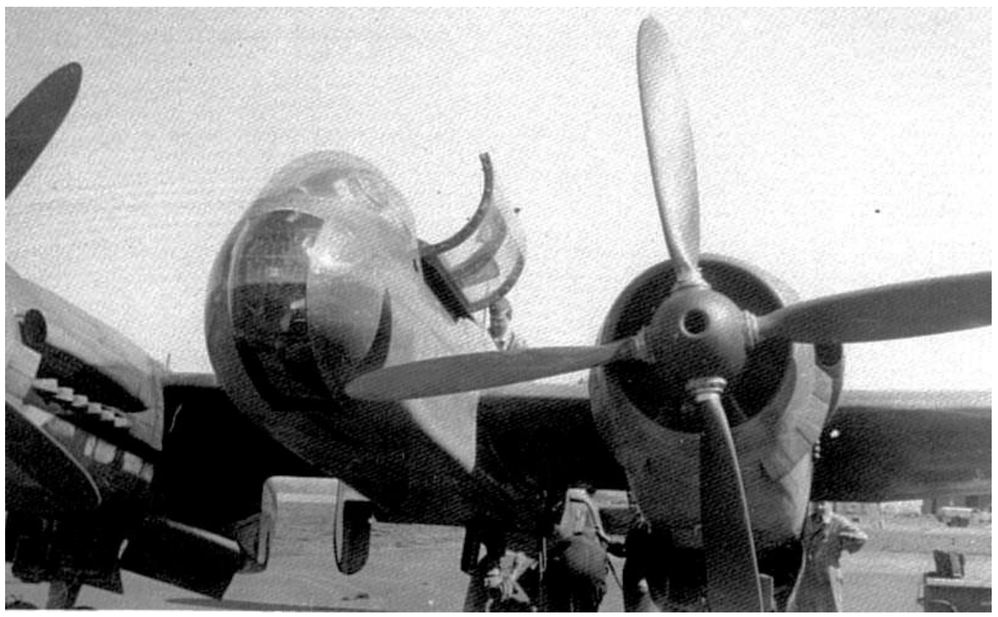
Royal Canadian Armoured Corps, "Ironside"

Royal Canadian Electrical and Mechanical

four-row radial propeller engines. The Ar E.560 4 was to be a turbo-powered four engine jet with swept back wings. The Ar E.560 7 was a smaller twin engine turboprop bomber with swept back wings. The Ar E.560 8 was a six engine turboprop bomber with swept back wings. The Ar E.560 11 was a four engine turbojet bomber with swept back wings. They were all equipped with retractable tricycle undercarriage. All of the Arado E.560 variants had a pressurized cockpit for a crew of two located at the front end of the fuselage.







Engineers (RCEME), "Bluebell"

Royal Canadian Engineers (RCE)

Royal Canadian Navy (RCN), Warships

Shelldrake, Canadian Artillery Museums and Gun Monuments

Siegecraft - No Fortress Impregnable

Sieges (Part 1)

Sieges (Part 2)

Sieges (Part 3)

Sieges (Part 4)

Sieges (Part 5)

Sieges (Part 6)

Sieges (Part 7) Appendixes and Footnotes

Skaarup, Aage C. Warrant Officer, RCAF & CF

Skaarup, Harold J. G753, Corporal, 5th Armoured Regiment, 8th Princess Louise's New Brunswick Hussars

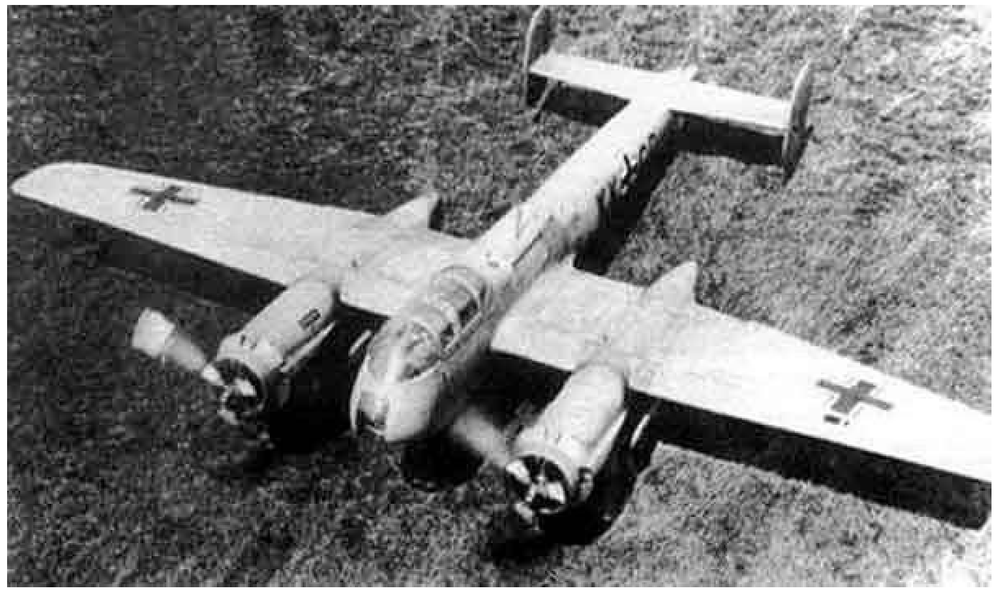
Skaarup, Sergeant (Unteroffizier) Frederick C. Westfälische Feldartillerie-Regiment Nr. 22 and Reserve Feldartillerie-Regiment Nr. 45

Small Arms in the Fredericton Region Museum, Handguns

Small Arms in the Fredericton Region Museum, Machine Guns

Small Arms in the Fredericton Region Museum, Rifles and Shotguns

Small Arms in the New Brunswick Military History







Arado Ar 240, heavy fighter/attack (prototype) in Luftwaffe service. (Luftwaffe Photos)

Museum, 5 CDSB Gagetown, Handguns

Small Arms in the New Brunswick Military History Museum, Rifles, Machine Guns, Mortars and Rocket Launchers

Steam Locomotives and Trains of Canada

Ticonderoga Soldier - Elijah Estabrooks, 1758-1760, A Massachusetts Provincial Soldier in the French and Indian War

Visitors: Questions and Answers

Warplane Survivors USA: Alabama

Warplane Survivors USA: Alaska

Warplane Survivors USA: Arizona Warplanes

Warplane Survivors USA: Arizona, Tucson, Pima Air & Space Museum

Warplane Survivors USA: Arizona, Tucson, Pima Air & Space Museum, Bell Helicopters and Aircraft

Warplane Survivors USA: Arizona, Tucson, Pima Air & Space Museum, Boeing Aircraft

Warplane Survivors USA: Arizona, Tucson, Pima Air & Space Museum, Convair Aircraft

Warplane Survivors USA: Arizona, Tucson, Pima Air & Space Museum, Douglas Aircraft

Warplane Survivors USA: Arizona, Tucson, Pima Air & Space Museum, Fairchild Aircraft



Arado Ar 440 heavy fighter/attack derived from Ar 240 (prototype). (Luftwaffe Photo)



Warplane Survivors
USA: Arizona, Tucson, Pima Air & Space Museum, Grumman Aircraft

Warplane Survivors
USA: Arizona, Tucson, Pima Air & Space Museum, Hiller, Hughes, Kaman and Piasecki Helicopters

Warplane Survivors
USA: Arizona, Tucson, Pima Air & Space Museum, Lockheed Aircraft

Warplane Survivors
USA: Arizona, Tucson, Pima Air & Space Museum, McDonnell Aircraft

Warplane Survivors
USA: Arizona, Tucson, Pima Air & Space Museum, Mikoyan-Gurevich Aircraft

Warplane Survivors
USA: Arizona, Tucson, Pima Air & Space Museum, North American Aircraft

Warplane Survivors
USA: Arizona, Tucson, Pima Air & Space Museum, Northrop Aircraft

Warplane Survivors
USA: Arizona, Tucson, Pima Air & Space Museum, Republic Aircraft

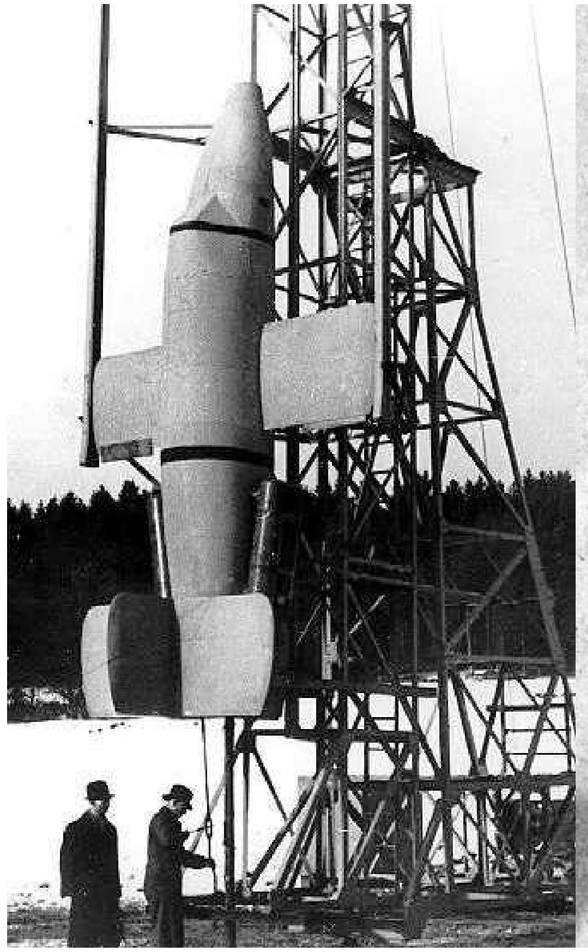
Warplane Survivors
USA: Arizona, Tucson, Pima Air & Space Museum, Sikorsky Helicopters

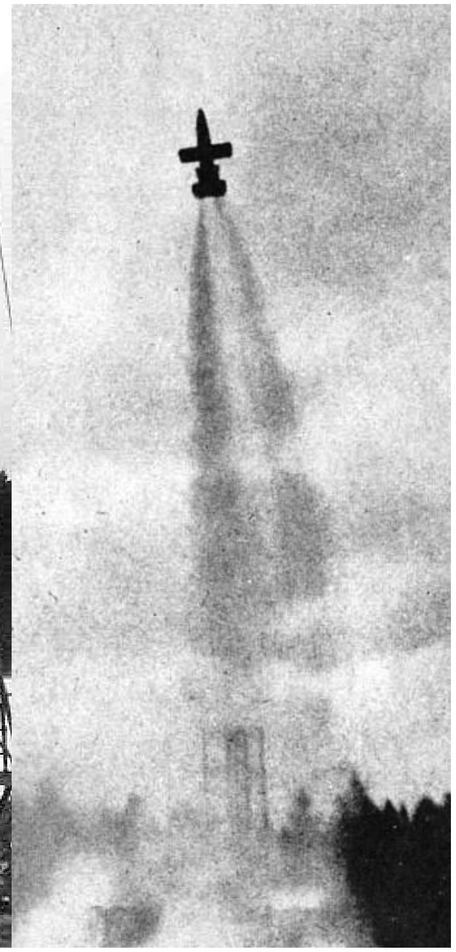
Warplane Survivors
USA: Arkansas

Warplane Survivors
USA: California Warplanes

Warplane Survivors
USA: California, Alameda, USS Hornet Museum

Warplane Survivors
USA: California, Atwater,









Castle Air Museum

Warplane Survivors USA: California, China Lake, US Naval Museum of Armament & Technology

Warplane Survivors USA: California, Chino, Planes of Fame Air Museum

Warplane Survivors USA: California, Chino, Yanks Air Museum

Warplane Survivors USA: California, Fairfield, Jimmy Doolittle Air & Space Museum

Warplane Survivors USA: California, Lancaster, Milestones of Flight Air Museum

Warplane Survivors USA: California, McClellan, Aerospace Museum of California

Warplane Survivors USA: California, Oakland Aviation Museum

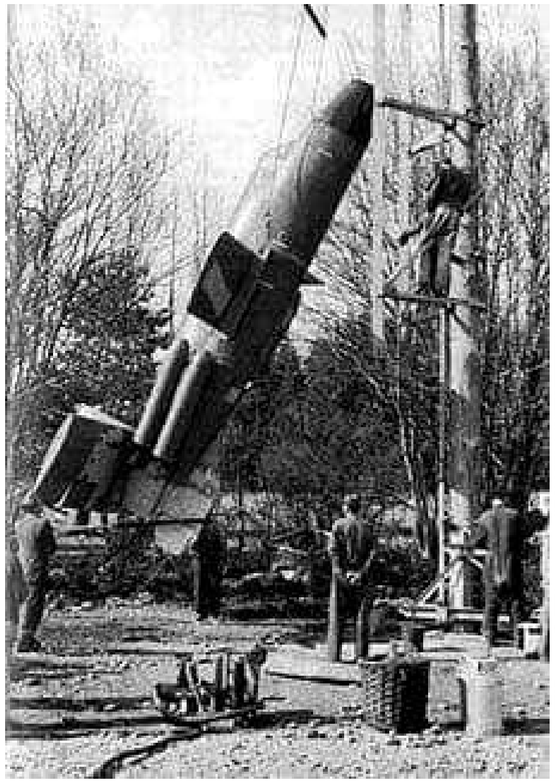
Warplane Survivors USA: California, Palm Springs Air Museum

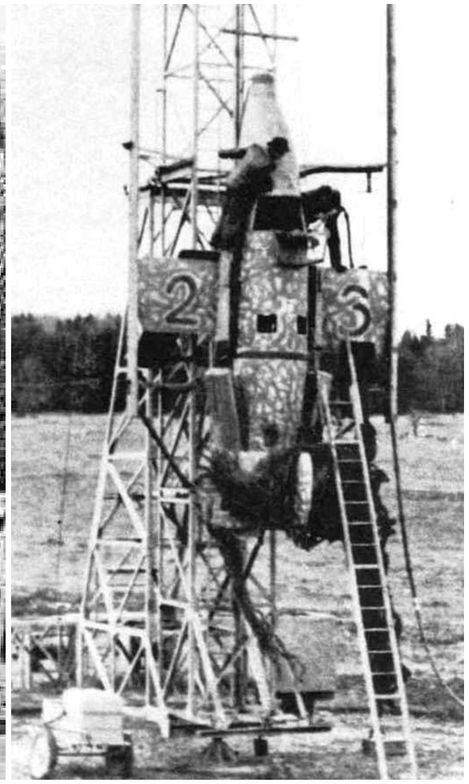
Warplane Survivors USA: California, Palmdale, Joe Davies Heritage Airpark

Warplane Survivors USA: California, Paso Robles, Estrella Warbird Museum

Warplane Survivors USA: California, Riverside, March Field Air Museum

Warplane Survivors USA: California, Rosamond, Edwards AFB, Air Force Flight Test Museum





Bachem Ba 349A-1 Natter in the vertical launch position in Germany, 1945. (Luftwaffe Photos)

Bachem Ba 349 Natter

The Bachem Ba 349A Natter is a single-seat part-expendable target-defence interceptor powered by one 3,748-lb thrust Walter HWK 109-509A-2 bi-propellant rocket motor and four 2,640-lb thrust Schmidding 109-533 booster rockets. It was launched vertically, and had a maximum speed of 497-mph, a climb-rate of 36,415 ft per minute and a service ceiling of 45,920'. It had a radius of action at 39,360' of 25 miles. The Natter weighed 4,840 lbs at takeoff. It had a wing span of 12 feet, and a length of 20 feet.



Warplane Survivors USA: California, San Diego Air & Space Museum

Warplane Survivors USA: California, San Diego, Flying Leatherneck Aviation Museum

Warplane Survivors USA: California, San Diego, USS Midway

Warplane Survivors USA: California, Santa Rosa, Pacific Coast Air Museum

Warplane Survivors USA: California, Torrance, Western Museum of Flight

Warplane Survivors USA: Colorado

Warplane Survivors USA: Connecticut

Warplane Survivors USA: Delaware

Warplane Survivors USA: Florida Warplanes

Warplane Survivors USA: Florida, NAS Pensacola, National Museum of Naval Aviation

Warplane Survivors USA: Florida, Polk City, Fantasy of Flight, Kermit Weeks Collection

Warplane Survivors USA: Florida, Titusville, Valiant Air Command Warbird Museum

Warplane Survivors USA: Georgia

Warplane Survivors USA: Georgia, Warner Robins, Robins AFB, Museum of Aviation

Warplane Survivors USA: Hawaii



Warplane Survivors USA: Idaho
Warplane Survivors USA: Illinois
Warplane Survivors USA: Indiana
Warplane Survivors USA: Iowa
Warplane Survivors USA: Kansas
Warplane Survivors USA: Kentucky
Warplane Survivors USA: Louisiana
Warplane Survivors USA: Maine
Warplane Survivors USA: Maryland
Warplane Survivors USA: Massachusetts
Warplane Survivors USA: Michigan
Warplane Survivors USA: Minnesota
Warplane Survivors USA: Mississippi
Warplane Survivors USA: Missouri
Warplane Survivors USA: Montana
Warplane Survivors USA: Nebraska
Warplane Survivors USA: Nebraska, Ashland, Strategic Air and Space Museum
Warplane Survivors USA: Nevada
Warplane Survivors USA: New England Warplanes
Warplane Survivors USA: New Hampshire
Warplane Survivors USA: New Jersey





Bachem Ba 349A-1 Natter recovered in Germany by American troops at St. Leonhard im Pitztal, Austria in May 1945. (US Army Photos)

Warplane Survivors USA: New Mexico

Warplane Survivors USA: New York

Warplane Survivors USA: New York, USS Intrepid Sea, Air & Space Museum

Warplane Survivors USA: North Carolina

Warplane Survivors USA: North Dakota

Warplane Survivors USA: Ohio

Warplane Survivors USA: Ohio, Dayton, National Museum of the USAF

Warplane Survivors USA: Oklahoma

Warplane Survivors USA: Oregon

Warplane Survivors USA: Oregon, McMinnville, Evergreen Aviation & Space Museum

Warplane Survivors USA: Pennsylvania

Warplane Survivors USA: Puerto Rico

Warplane Survivors USA: Rhode Island

Warplane Survivors USA: South Carolina

Warplane Survivors USA: South Dakota

Warplane Survivors USA: Tennessee

Warplane Survivors USA: Texas

Warplane Survivors USA: Texas, Abilene, Dyess AFB, Texas Museum of Military History



Bachem Ba 349A-1 Natter replica on display in the Deutsches Museum, Munich, Germany. This Natter is said to have been reconstructed partly from sub-assemblies that survived the end of the war. This machine is of the experimental type as launched from the steel tower and is painted to look like an M17. (Aconcagua Photo)

Warplane Survivors USA: Texas, Abilene, Dyess AFB, Texas, San Antonio, USAF History & Traditions Museum

Warplane Survivors USA: Texas, Addison, Cavanaugh Flight Museum

Warplane Survivors USA: Texas, Austin, Camp Mabry, Texas Military Forces Museum

Warplane Survivors USA: Texas, Corpus Christi, USS Lexington

Warplane Survivors USA: Texas, Dallas, Frontiers of Flight Museum

Warplane Survivors USA: Texas, Fort Hood

Warplane Survivors USA: Texas, Galveston, Lone Star Flight Museum

Warplane Survivors USA: Texas, Midland, American Airpower Heritage Flying Museum

Warplane Survivors USA: Texas, San Marcos, Centex Wing, Commemorative Air Force

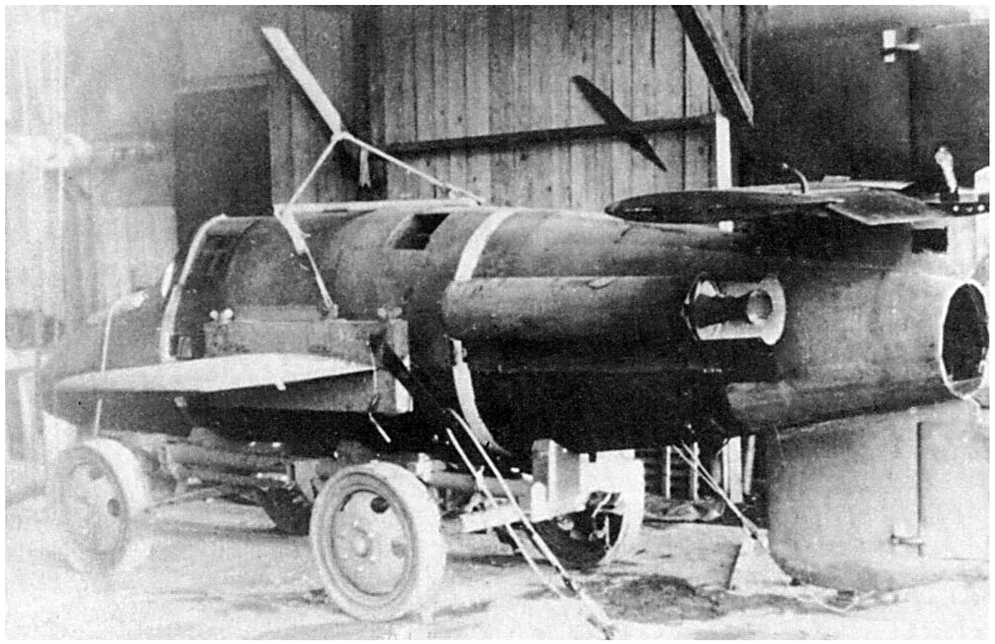
Warplane Survivors USA: Utah

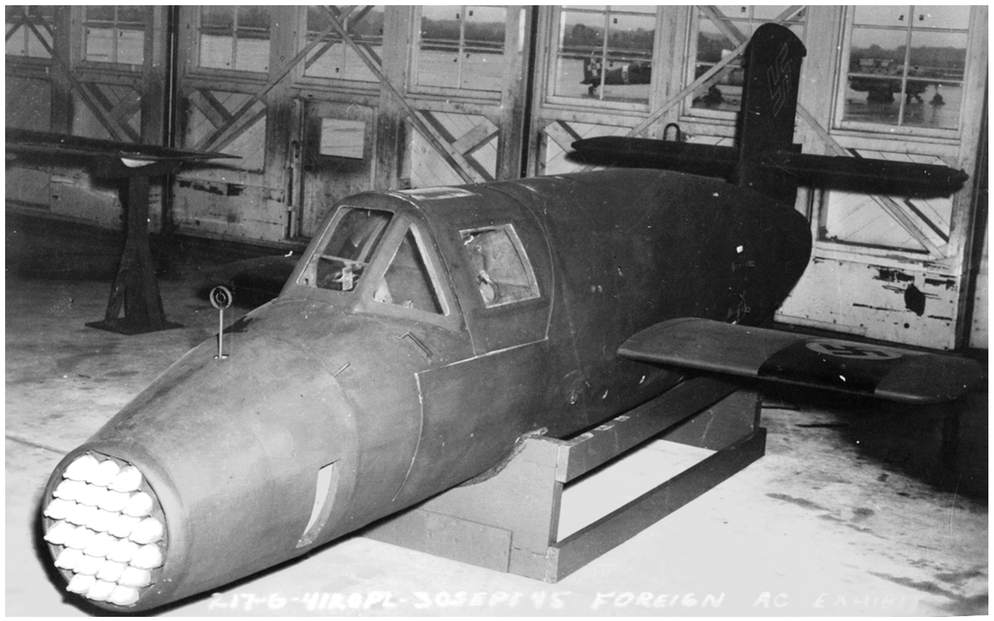
Warplane Survivors USA: Vermont

Warplane Survivors USA: Virginia

Warplane Survivors USA: Virginia, Chantilly, Steven F. Udvar-Hazy Center

Warplane Survivors USA: Virginia, Virginia Beach, Military Aviation Museum





Warplane Survivors USA: Washington

Warplane Survivors USA: Washington, District of Columbia

Warplane Survivors USA: Washington, Everett, Paul Allen's Flying Heritage & Combat Armor Museum

Warplane Survivors USA: Washington, Seattle, Museum of Flight

Warplane Survivors USA: West Virginia

Warplane Survivors USA: Wisconsin

Warplane Survivors USA: Wyoming

Warplanes of the Second World War preserved in Albania, Monaco and Montenegro

Warplanes of the Second World War preserved in Argentina

Warplanes of the Second World War preserved in Australia

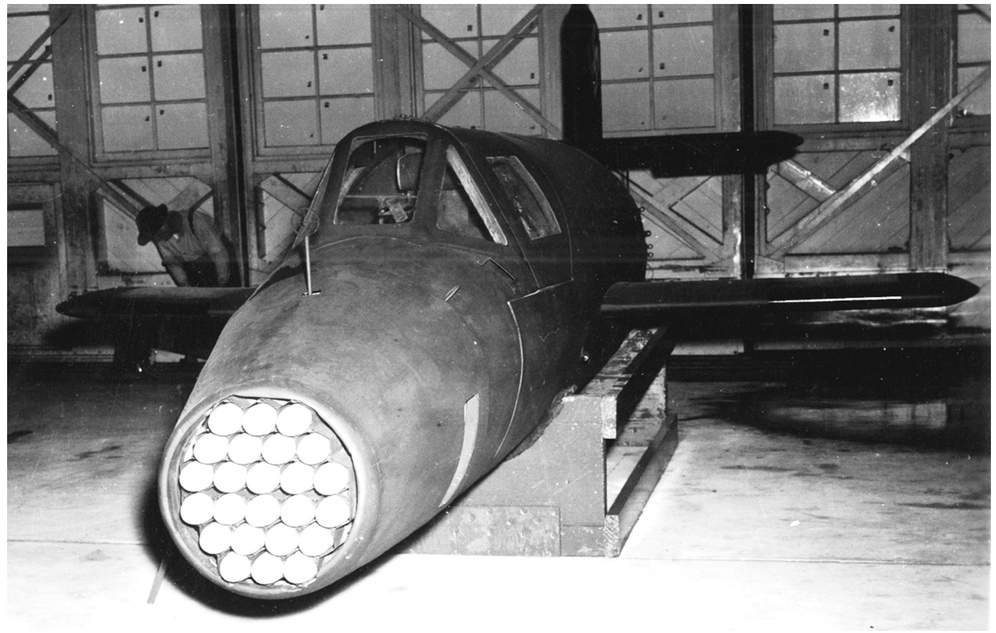
Warplanes of the Second World War preserved in Austria

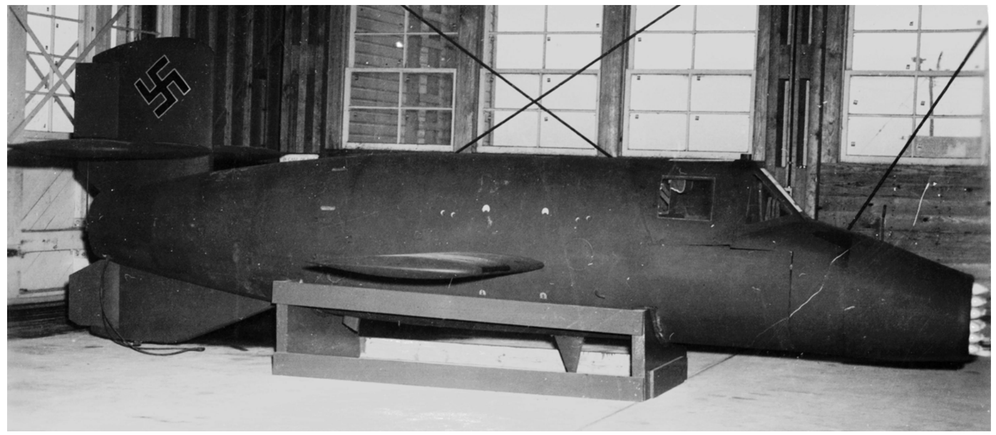
Warplanes of the Second World War preserved in Belarus, Bohemia and Moravia, Macedonia, and Ljubljana

Warplanes of the Second World War preserved in Belgium

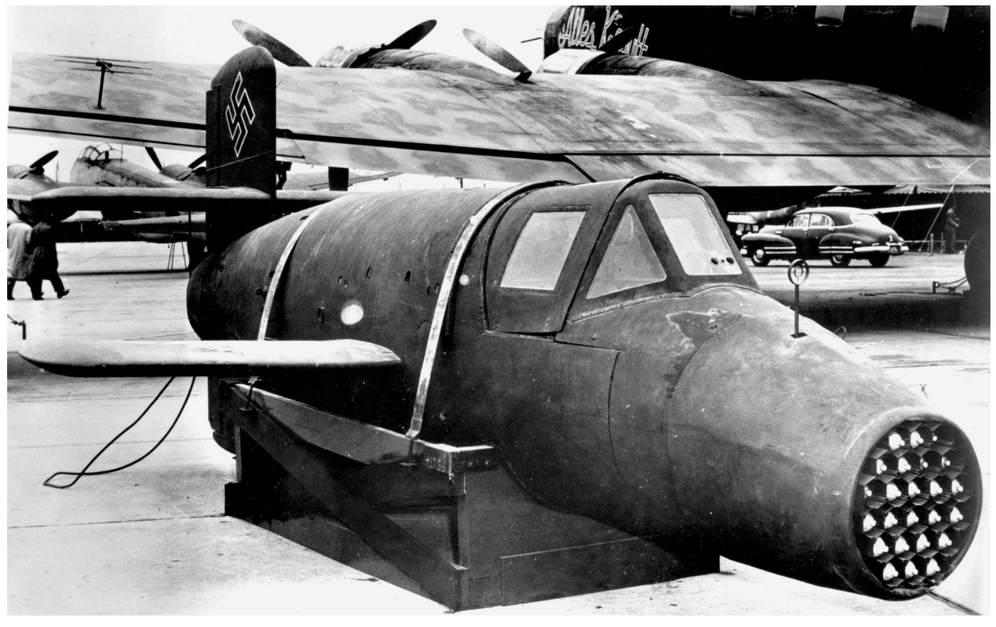
Warplanes of the Second World War preserved in Bolivia

Warplanes of the Second World War preserved in Brazil





Bachem Ba 349 Natter in the USA, being prepared for storage with the NASM. This Natter was recovered in Germany by American troops at St. Leonhard im Pitztal, Austria in May 1945. (USAAF Photos)



Warplanes of the Second World War preserved in Bulgaria

Warplanes of the Second World War preserved in Cambodia, Laos and Vietnam

Warplanes of the Second World War preserved in Canada

Warplanes of the Second World War preserved in Canada (German Luftwaffe)

Warplanes of the Second World War preserved in Chile

Warplanes of the Second World War preserved in China

Warplanes of the Second World War preserved in Colombia

Warplanes of the Second World War preserved in Croatia

Warplanes of the Second World War preserved in Cuba

Warplanes of the Second World War preserved in Denmark

Warplanes of the Second World War preserved in Finland

Warplanes of the Second World War preserved in France

Warplanes of the Second World War Preserved in Germany

Warplanes of the Second World War preserved in Greece

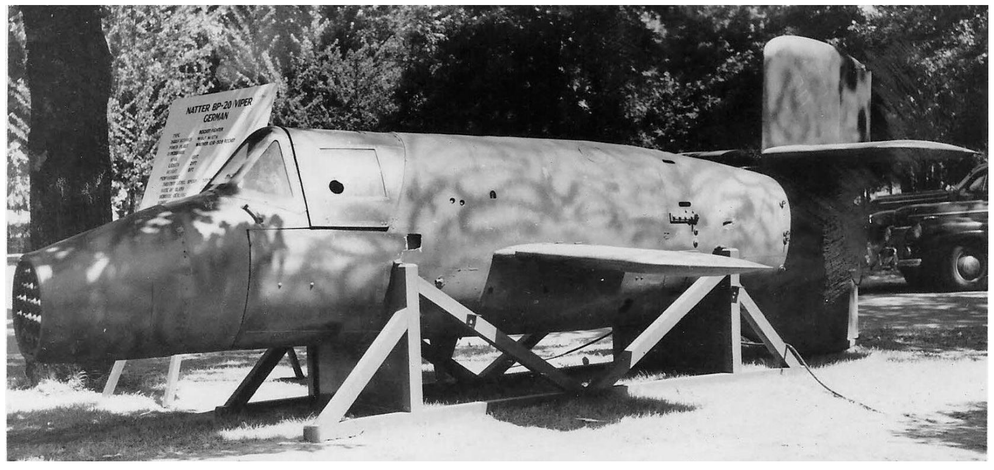
Warplanes of the Second World War



Bachem Ba 349 Natter on display in the USA, prior to being stored with the NASM. This Natter was recovered in Germany by American troops at St. Leonhard im Pitztal, Austria in May 1945. (USAAF Photos)



Bachem Ba 349 Natter on display in the USA, prior to being stored with the NASM. (SDASM Photo)



Bachem Ba 349 Natter on display in the USA. (Edgar Diegan Photo)

preserved in Guatemala

Warplanes of the Second World War preserved in Honduras

Warplanes of the Second World War preserved in Hungary

Warplanes of the Second World War preserved in India

Warplanes of the Second World War preserved in Indonesia

Warplanes of the Second World War preserved in Iraq

Warplanes of the Second World War preserved in Israel

Warplanes of the Second World War preserved in Italy

Warplanes of the Second World War preserved in Japan

Warplanes of the Second World War preserved in Malta

Warplanes of the Second World War preserved in Manchukuo (Manchuria), and Mengjiang (Inner Mongolia)

Warplanes of the Second World War preserved in Mexico

Warplanes of the Second World War preserved in Myanmar (Burma)

Warplanes of the Second World War preserved in New Zealand

Warplanes of the Second World War



Bachem Ba 349A-1, T2-1 in the Smithsonian Institute National Air and Space Museum's Paul E. Garber Preservation, Restoration, and Storage Facility. This Natter was recovered in Germany by American troops at St. Leonhard im Pitztal, Austria in May 1945. (Creanium Photo)

The Natter's weapon systems were simple and potentially devastating. They comprised either a honeycomb loaded with 24 electrically fired 73-mm Föhn spin-stabilized unguided air-to-air rockets, or 33 R4M 55-mm spin-stabilized rockets, or (projected) two 30-mm MK 108 cannon each with 30 rpg .or 32 R40 air-to-air missiles located behind a jettisonable cover in nose section. The alternative, the Rheinmetall SG 119 consisted of six clusters, each cluster containing seven MK108 barrels grouped together in a cylinder with the clusters arranged about the Viper's nose as in a revolver.

In April 1945, French armour advanced into Waldsee near Berlin, where the Natter's were being assembled, and captured a great number of spare parts. Only a few days before the French arrived, fifteen rocket engines destined for Vipers had been thrown into Lake Waldsee to prevent their capture. The secret was not well kept however and all were later recovered.

Plans for mass production of the Ba 349 A-1 were authorized on 1 March 1945, but only a few Natters were actually completed. These were followed by the improved Ba 349 B-1 (Entwurf 2) interceptors which were to be produced at Waldsee, but few were actually completed.

One of the models was powered by a solid-fuel rocket to evaluate takeoff characteristics. Practical tests were carried out at Peenemünde, where a first test conducted during February 1945, proved unsuccessful. Willy A. Fiedler, a testing engineer working for the RLM, was sent to the Heuberg Hills to oversee the program. Erich Bachem is quoted after the war as having said that about twenty Vipers had been used for practical tests. Fifteen were of the A-series, and four B-series aircraft. All were constructed at Waldsee. Still others were assembled by the Wolf Hirth glider factory. Four additional Ba 349s, possibly of the B-series, were captured at the end of the war by Allied forces near St. Leonhard, Austria.

Only two Bachem Natters are known to exist. The NASM has an original Ba 349A-1 Natter. It appears that this machine was captured at St. Leonhard in the Pitztal, Austria in May 1945 by US troops. It was then shipped to Freeman Field, Indiana, for analysis. Captured equipment number T2-1 was assigned to the Natter and the USAF transferred it to the National Air Museum (now the NASM) on 1 May 1949.

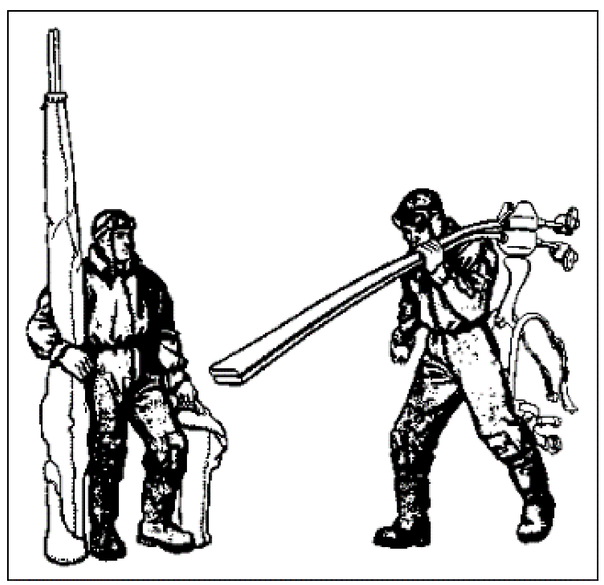
The Deutsches Museum, Munich, Germany, displays a Ba 349A-1 which is a partial replica, and is restored in the colours and markings of one of the unmanned test aircraft. This machine is of the experimental type as launched from the steel tower and is painted to look like M17. The Natter displayed at the Deutsches Museum is said to have been reconstructed partly from sub-assemblies that survived the end of the war.

There are several static reproductions of Natters around the world, for example at the "Planes of Fame", Chino, California and "Fantasy of Flight", Polk City, Florida, USA.

preserved in Norway
Warplanes of the Second World War preserved in Poland
Warplanes of the Second World War preserved in Portugal
Warplanes of the Second World War preserved in Romania
Warplanes of the Second World War preserved in Russia
Warplanes of the Second World War preserved in San Marino
Warplanes of the Second World War preserved in Saudi Arabia
Warplanes of the Second World War preserved in Serbia
Warplanes of the Second World War preserved in Slovakia
Warplanes of the Second World War preserved in South Africa
Warplanes of the Second World War preserved in Spain
Warplanes of the Second World War preserved in Sweden
Warplanes of the Second World War preserved in Switzerland
Warplanes of the Second World War preserved in Thailand
Warplanes of the Second World War preserved in the Czech Republic
Warplanes of the Second World War



Bachem Ba 349A-1, Fantasy of Flight Museum, Polk City, Florida. (Author Photos)





preserved in the Dominican Republic

Warplanes of the Second World War preserved in the Netherlands

Warplanes of the Second World War preserved in the Philippines

Warplanes of the Second World War preserved in the Republic of Korea

Warplanes of the Second World War preserved in the Ukraine

Warplanes of the Second World War preserved in the United Kingdom

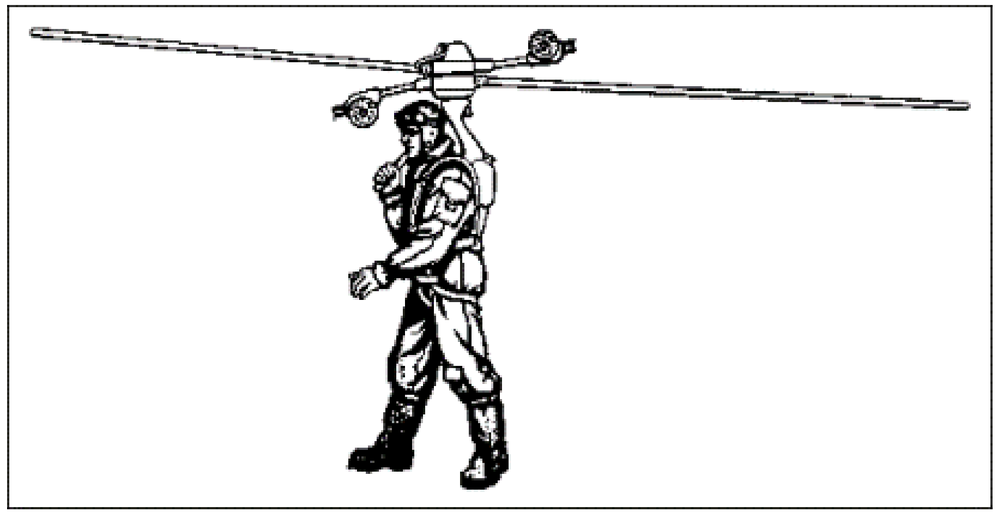
Warplanes of the Second World War preserved in the United Kingdom, Avro Lancaster

Warplanes of the Second World War preserved in the United Kingdom, Airspeed Horsa, GAL Hamilcar, GAL Hotspur, Slingsby and WACO Hadrian gliders

Warplanes of the Second World War preserved in the United Kingdom, Avro Anson

Warplanes of the Second World War preserved in the United Kingdom, Boeing B-17 Flying Fortress and Boeing B-29 Super Fortress

Warplanes of the Second World War preserved in the United



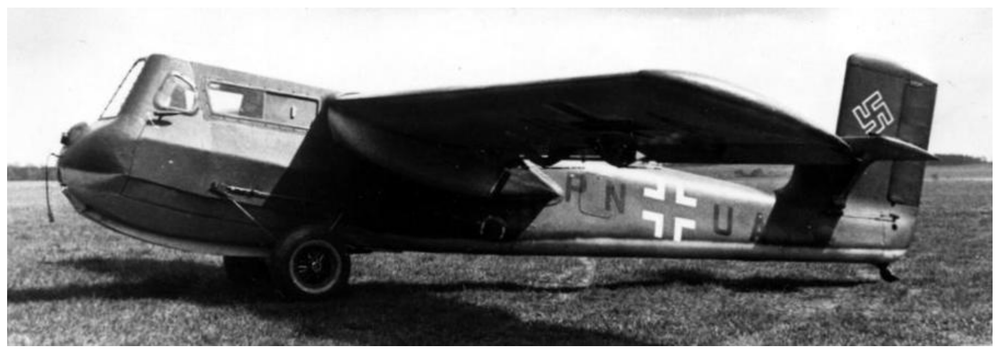
Paul Bäumgartl and Heliofly III/57 diagrams. (Luftwaffe Diagrams and Photos)

Baumgärtl Heliofly III/57

The Baumgärtl Heliofly III/57 and Baumgärtl Heliofly III/59 were 1940s experimental backpack helicopters designed and built by the Austrian-designer Paul Bäumgartl. Following on from his earlier experiments with strap-on autgyros the Heliofly III/57 was powered by two 8 hp (6 kW) Argus As 8 piston engines each driving a single-blade of the contra-rotating rotors. A problem with the supply of the As 8 engine forced a re-design to use one 16 hp (12 kW) engine, powering two rotors on a common co-axial shaft, with the engine driving one rotor directly and the other through gearing to overcome the torque effect.

A further development was called the Helio- fly III/59, powered with a more powerful 16hp engine. Its dry weight was only 35kg and the takeoff weight was about 120kg. Baumgärtl had made several flights, but the desperate military situation by the end of the war put an end to his extraordinary project.







Kingdom, Boulton Paul Defiant

Warplanes of the Second World War preserved in the United Kingdom, Bristol Beaufort and Bristol Beaufighter

Warplanes of the Second World War preserved in the United Kingdom, Bristol Bulldog and Gloster Gladiator

Warplanes of the Second World War preserved in the United Kingdom, Consolidated PBY-5 Catalina and Consolidated B-24 Liberator

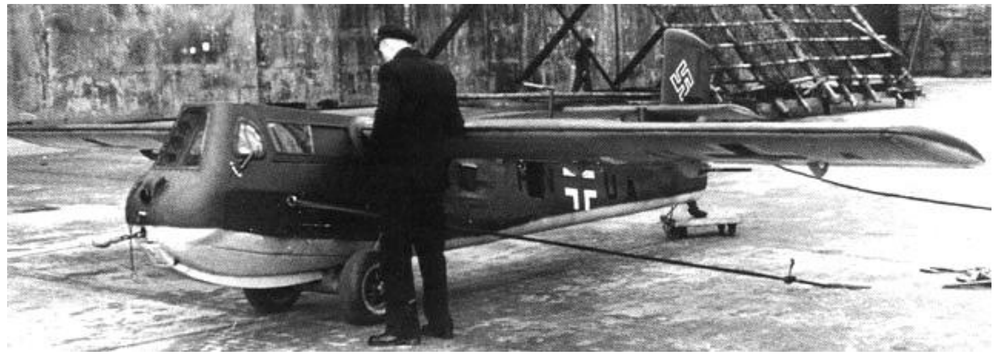
Warplanes of the Second World War preserved in the United Kingdom, Curtiss P-40 Kittyhawk

Warplanes of the Second World War preserved in the United Kingdom, de Havilland biplanes

Warplanes of the Second World War preserved in the United Kingdom, de Havilland DH.98 Mosquito

Warplanes of the Second World War preserved in the United Kingdom, Douglas Skyraider

Warplanes of the Second World War preserved in the United Kingdom, Fairey Albacore, Fairey Fulmar, Fairey Barracuda and Fairey Battle



Blohm + Voss BV 40, glider interceptor (prototype). (Luftwaffe Photos)





Blohm + Voss BV 138, flying-boat (early versions as Ha 138) in Luftwaffe service. (Luftwaffe Photos)

Warplanes of the Second World War preserved in the United Kingdom, Fairey Firefly

Warplanes of the Second World War preserved in the United Kingdom, Fairey Swordfish

Warplanes of the Second World War preserved in the United Kingdom, German War Prizes

Warplanes of the Second World War preserved in the United Kingdom, Gloster F.9/40, F.1, F.2 and F.3 Meteor

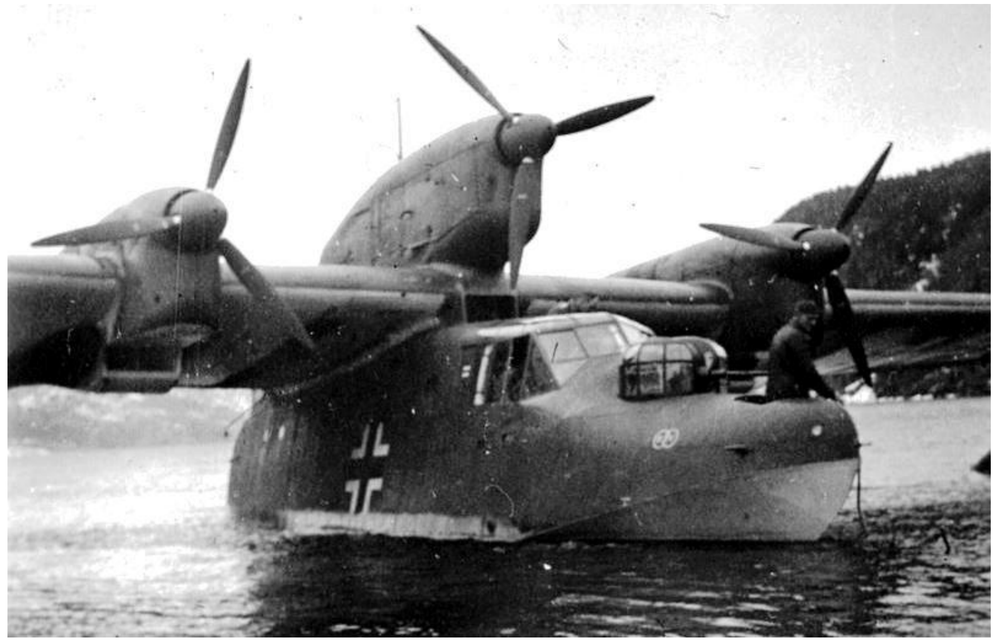
Warplanes of the Second World War preserved in the United Kingdom, Goodyear Corsair and Vought Corsair

Warplanes of the Second World War preserved in the United Kingdom, Grumman Martlet, Grumman Hellcat, Grumman Bearcat and Grumman Avenger

Warplanes of the Second World War preserved in the United Kingdom, Handley Page Hampden and Handley Page Halifax

Warplanes of the Second World War preserved in the United Kingdom, Hawker Demon, Hawker Fury, Hawker Hart, Hawker Hind, Hawker Nimrod and Hawker Tomtit

Warplanes of the Second World War preserved in the United



Blohm + Voss BV 138C, Hemnesfjorden, Norway, being serviced by its Luftwaffe crews. (Karl Marth Photo)



Blohm + Voss BV 138C-1 reconnaissance seaplane, abandoned at Tromsø in Norway, 1945. Possibly (Wk. Nr. 0310081), captured at Kastrup-See. If so, this aircraft was designated RAF AM70, scrapped at Felixstowe, England in 1948. (RAF Photo)



Blohm + Voss BV 138C seaplane being pulled from the water at at Kirkenes, Norway, during the Second World War. In the left background is a Heinkel He 115 float plane from Küstenfliegergruppe 406 coded K6+EH. (USN Photo, NH 45564, Naval History and Heritage Command)

Blohm + Voss BV 138

The Blohm + Voss BV138 *Seedrache* (Sea Dragon), but nicknamed *Der Fliegende Holzschuh* ("flying clog", from the side-view shape of its fuselage) was trimotor flying boat that served as the *Luftwaffe*'s main seaborne long-range maritime patrol

Kingdom, Hawker Hurricane

Warplanes of the Second World War preserved in the United Kingdom, Hawker Typhoon, Hawker Tempest, Hawker Fury and Hawker Sea Fury

Warplanes of the Second World War preserved in the United Kingdom, Italian War Prizes

Warplanes of the Second World War preserved in the United Kingdom, Japanese War Prizes

Warplanes of the Second World War preserved in the United Kingdom, Miles Hawk Major, Miles Magister, Miles Martinet, Miles Messenger

Warplanes of the Second World War preserved in the United Kingdom, North American B-25 Mitchell

Warplanes of the Second World War preserved in the United Kingdom, North American Harvard and Texan trainers

Warplanes of the Second World War preserved in the United Kingdom, North American P-51 Mustang

Warplanes of the Second World War preserved in the United

and naval reconnaissance aircraft. A total of 297 BV 138s were built between 1938 and 1943. The aircraft was unusually powered by three engines, with one mounted high above the centerline driving a four-blade propeller, and one on each wing driving three-blade propellers.

The first of the 227 standard service variant, BV 138 C-1, began service in March 1941. Although various versions of the aircraft carried a variety of armament, the standard included two 20 mm MG 151/20 cannons, one in a power-operated bow turret and one in a power-operated stern turret, up to three 7.92 mm MG 15 machine guns, and a 13 mm (.51 in) MG 131 machine gun in the aft center engine nacelle. It could carry up to 500 kg (1,100 lb) of bombs or depth charges (under the starboard wing root only) or, in place of these, up to 10 passengers. Several were later fitted with FuG 200 *Hohentwiel* low-UHF band search radar for anti-shipping duties. Some were converted for the minesweeper role, as the BV 138 MS variant, with the "MS" suffix signifying *Minensuch* (German for mine-clearing, literally mine-search), carried a circular ring-shape degaussing device, a hoop with the same diameter as the length of the fuselage (encircling the entire hull), and field-generating equipment, instead of weapons.

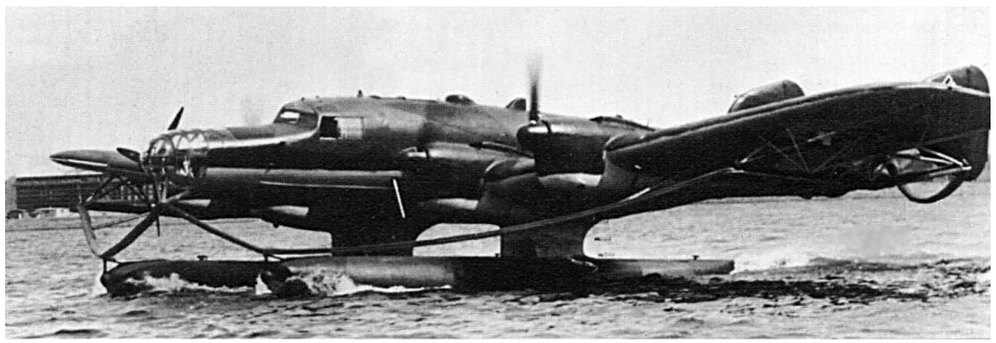
Blohm + Voss BV 138, flying-boat, (Wk. Nr. unknown), captured at Kastrup-See. Designated AM69, this aircraft was scrapped at Felixstowe.

Blöhm & Voss BV 138, flying-boat, (Wk. Nr. unknown), captured at Kastrup-See. Designated AM71, this aircraft was scrapped at Felixstowe.



Blohm + Voss BV 138 wreckage on display in the National Museum of Science and Technology (Danmarks Tekniske Museum) in Elsinore, Denmark. The wing spar is poised over the aircraft in the same position as it was, when the wreck was discovered in The Sound, off of Copenhagen. (Uffe R.B. Anderson Photo)

No complete Bv 138s remain in existence. However, the wreck of one aircraft, sunk after the war in a British air show, was raised from the seabed of the Øresund Sound in 2000, and is on display at the Danish Technical Museum in Helsingør. In June 2013, a vessel from the Norwegian Geological Survey filmed a Blohm + Voss BV 138 at a depth of 35 m in Porsangerfjorden, Norway, not far from the Second World War German seaplane harbour in Indre Billefjord.



Blohm + Voss BV 139 long-range seaplane in Luftwaffe service. (Luftwaffe Photo)

Kingdom, Republic P-47 Thunderbolt

Warplanes of the Second World War preserved in the United Kingdom, Short Sunderland

Warplanes of the Second World War preserved in the United Kingdom, Supermarine Seafire

Warplanes of the Second World War preserved in the United Kingdom, Supermarine Spitfire Mk. Ia to Mk. IXe

Warplanes of the Second World War preserved in the United Kingdom, Supermarine Spitfire Mk. XI to Mk. 46

Warplanes of the Second World War preserved in the United Kingdom, Supermarine Spitfire Tr. 9

Warplanes of the Second World War preserved in the United Kingdom, Supermarine Stranraer, Supermarine Walrus and Seagull

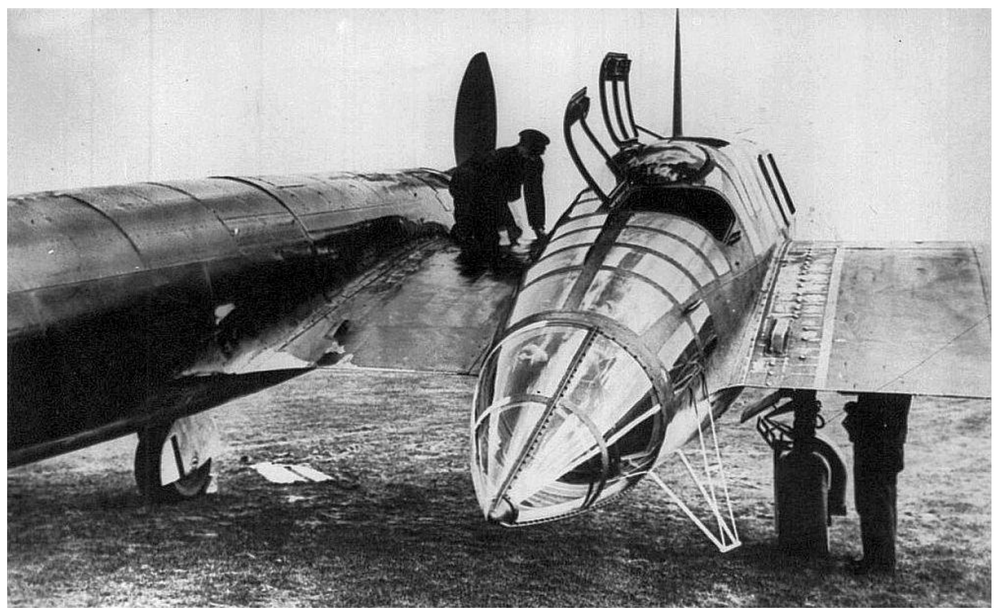
Warplanes of the Second World War preserved in the United Kingdom, Taylorcraft Auster

Warplanes of the Second World War preserved in the United Kingdom, Vickers Wellington

Warplanes of the Second World War preserved in the United







Kingdom, Westland Lysander

Warplanes of the Second World War preserved in the United States of America, Douglas SBD Dauntless and A-24 Banshee

Warplanes of the Second World War preserved in the United States of America, Bell P-39 Airacobra and Bell P-63 Kingcobra

Warplanes of the Second World War preserved in the United States of America, Boeing B-17 Flying Fortress

Warplanes of the Second World War preserved in the United States of America, Consolidated B-24 Liberator

Warplanes of the Second World War preserved in the United States of America, Consolidated PBY Catalina

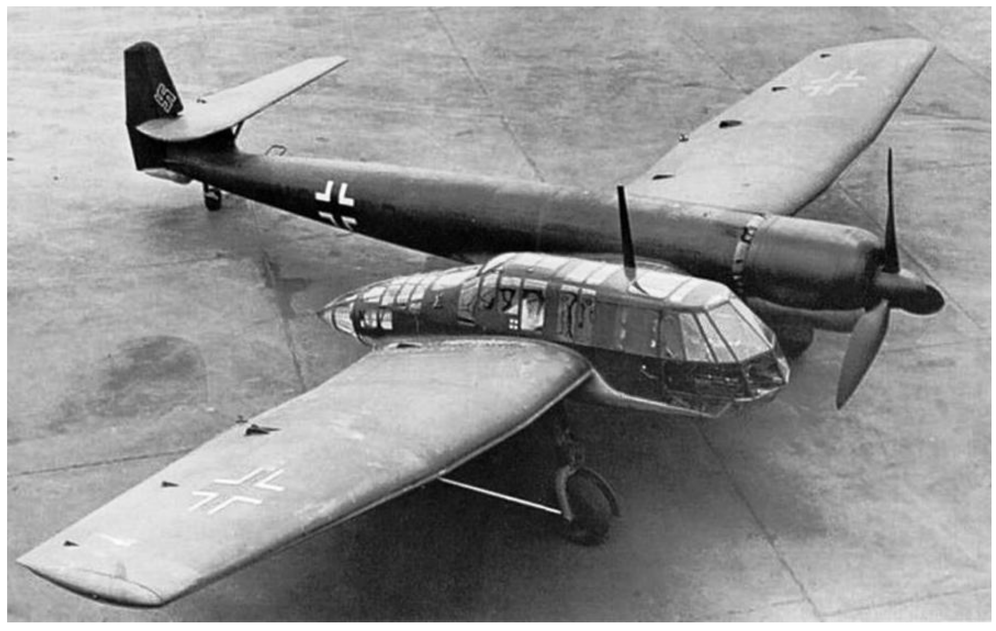
Warplanes of the Second World War preserved in the United States of America, Curtiss P-40 Warhawk, Tomahawk and Kittyhawk

Warplanes of the Second World War preserved in the United States of America, Douglas A-26 Invader

Warplanes of the Second World War preserved in the United States of America, Focke-Wulf Fw 190

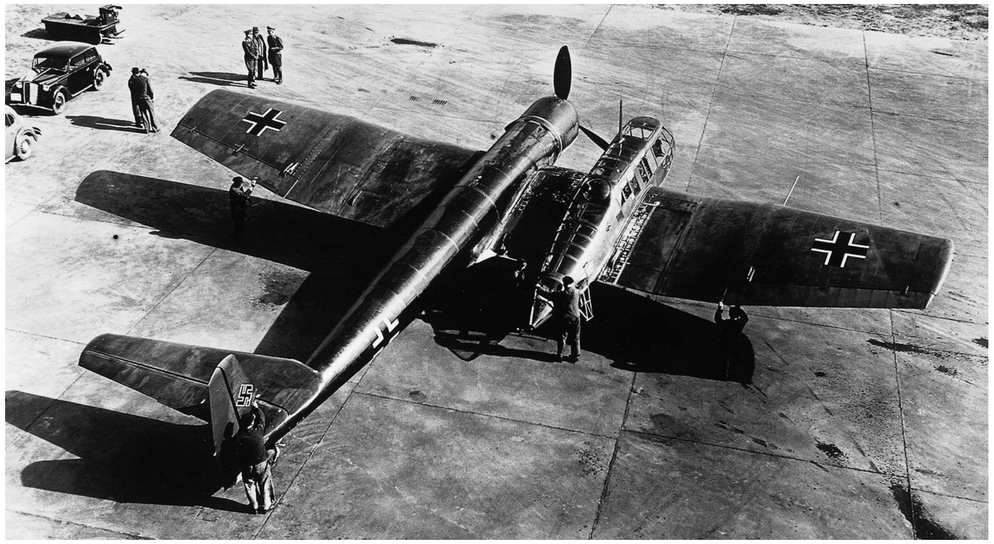




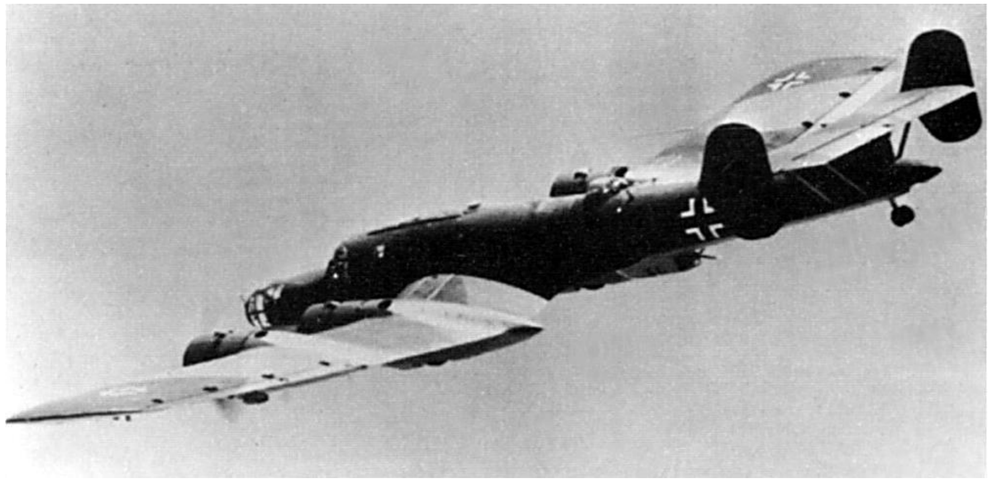


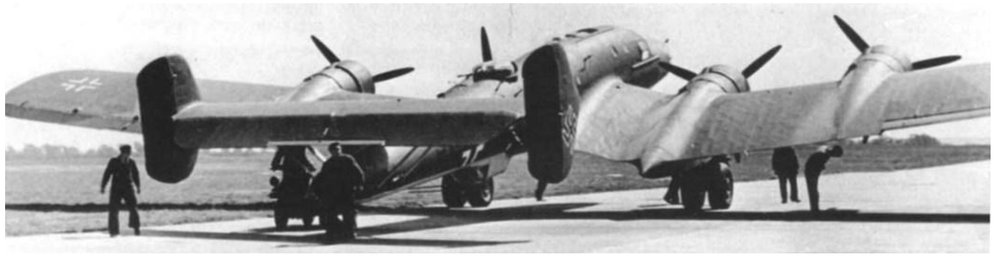


- Warplanes of the Second World War preserved in the United States of America, Grumman TBF Avenger and TBM Avenger
- Warplanes of the Second World War preserved in the United States of America, Lockheed P-38 Lightning
- Warplanes of the Second World War preserved in the United States of America, Messerschmitt Bf 109
- Warplanes of the Second World War preserved in the United States of America, Mitsubishi A6M Zero
- Warplanes of the Second World War preserved in the United States of America, North American B-25 Mitchell
- Warplanes of the Second World War preserved in the United States of America, North American P-51B and P-51C Mustangs
- Warplanes of the Second World War preserved in the United States of America, North American P-51D Mustang
- Warplanes of the Second World War preserved in the United States of America, North American P-51H, P-51K, F-6K, and Cavalier Mustangs
- Warplanes of the Second World War preserved in the United



Blohm + Voss BV 141 asymetrical tactical reconnaissance aircraft in Luftwaffe service. (Luftwaffe Photos)







States of America, Republic P-47 Thunderbolt

Warplanes of the Second World War preserved in the United States of America, Supermarine Spitfire

Warplanes of the Second World War preserved in the United States of America, Vought F4U Corsair and Goodyear FG-1D Corsair

Warplanes of the Second World War preserved in the USA, Fighters, Bombers and Patrol Aircraft

Warplanes of the Second World War preserved in Turkey

Warplanes of the Second World War preserved in Uruguay

Warplanes of the Second World War preserved in Venezuela

Warplanes of the Second World War preserved in Zimbabwe

Warplanes preserved in Afghanistan, Kabul Aviation Museum

Author

Reviews

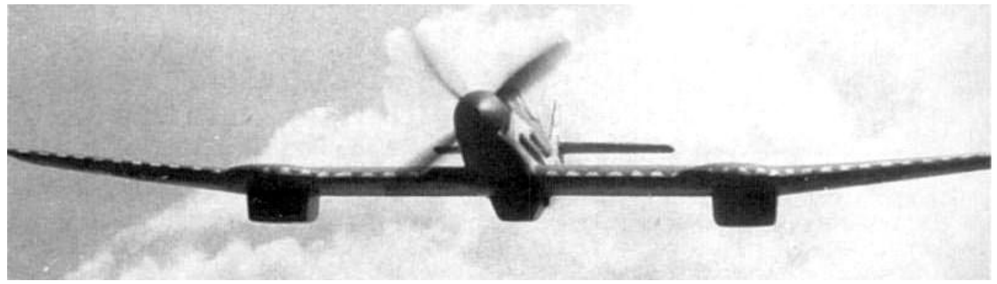
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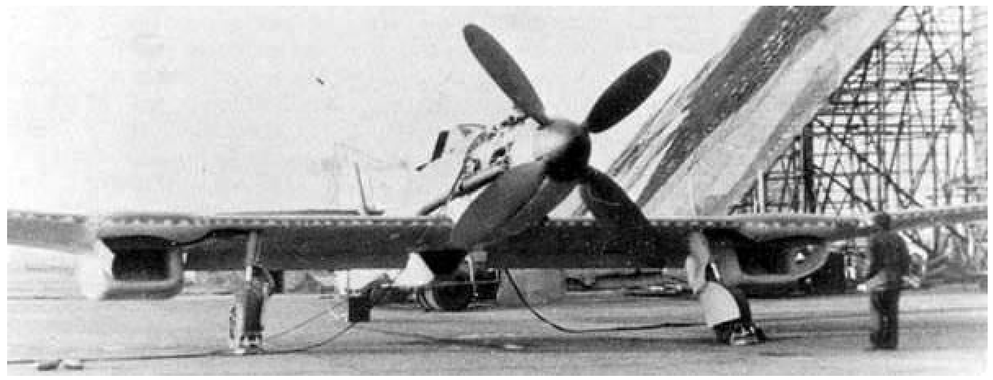
Home



Blohm + Voss BV 142, reconnaissance transport. (Luftwaffe Photos)

Blohm + Voss BV 144, transport (prototype).







Blohm + Voss BV 155B V-2. (Luftwaffe Photos)

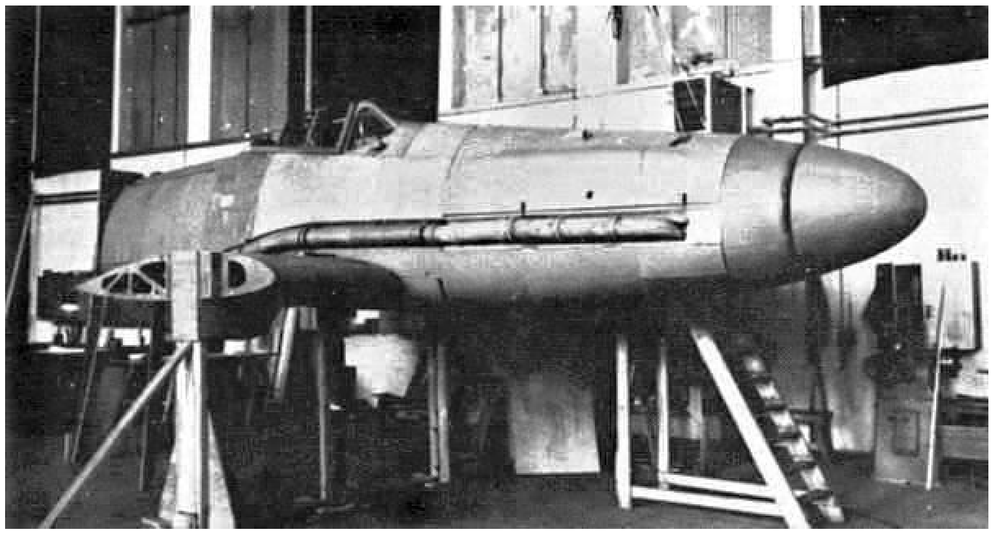
Blohm + Voss Bv 155B V-2

The BV 155 was designed to be a single-engine high performance fighter aircraft capable of capable of intercepting bombers at high altitudes and conducting reconnaissance as a secondary mission. One variant was also intended to operate from aircraft carriers with a tailhook system. The Bv 155 was powered by one Daimler-Benz DB 603 U engine and the Heinkel-

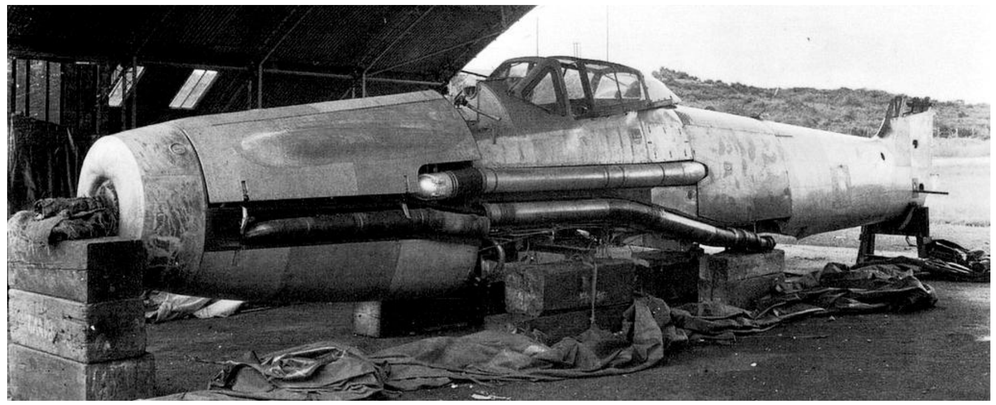
Hirth TKL 15 turbo supercharger. It was armed with one MK 108 30-mm cannon in the nose and two 20-mm MG 151 cannons in the wing.

The BV 155 featured an armoured, pressurized cabin with an ejection seat, high aspect ratio laminar-flow wings, wide-track landing gear, and a very advanced, though troublesome and complex, propulsion system. An air scoop located on the underside of the fuselage at the trailing edge of the wing fed outside air to the TKL 15 turbo-supercharger. The supercharger compressed the air and fed it to an intercooler mounted above. A pipe semi-recessed into the left fuselage (visible below the cockpit and above the long exhaust pipe) fed the cooled, high-pressure air from the intercooler forward to the engine-driven supercharger. Blohm + Voss designed the BV 155 to reach speeds of about 430-mph at over 50,000'.





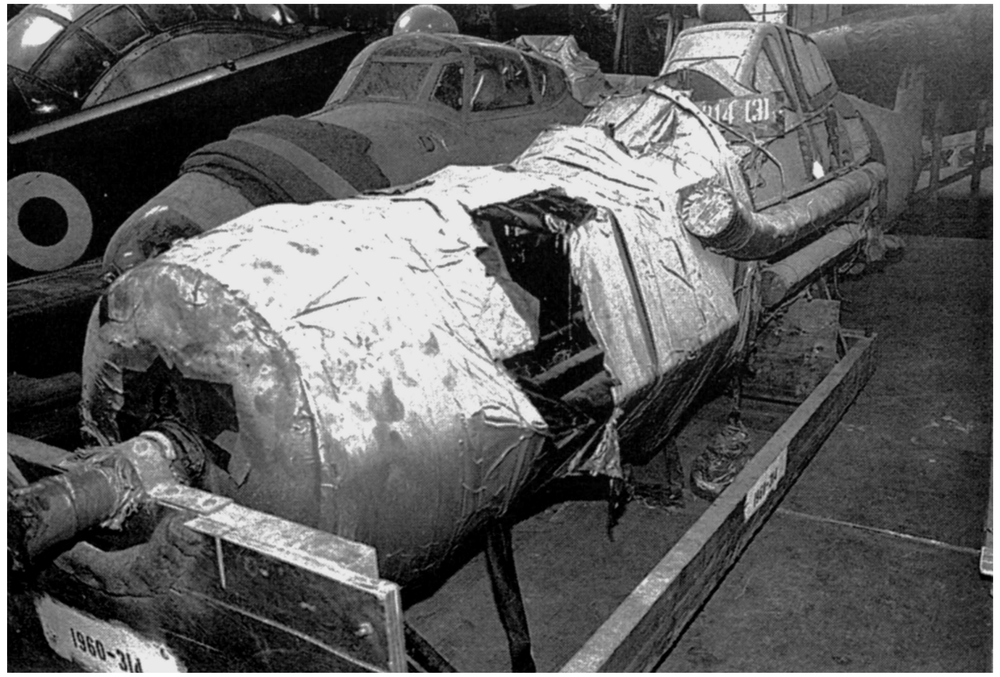




Blohm + Voss BV 155B V-2, Farnborough, England. before being transferred to the USAAF, where it was designated USA FE-505. (RAF Photos)

Blohm + Voss completed the BV 155B V1 (V for Versuch, German for experiment) and the first of three prototypes flew on 8 February 1945 out of newly armoured hangars at Finkenwerder, near Hamburg. On 8 February the V1 took to the air but the right radiator leaked badly and chief test pilot Helmut “Wasa” Rodig terminated the flight. Following repairs, the aircraft flew twice more on 10 and 26 February. Repairs followed each flight but it is doubtful that the airplane flew again after the 26th.

All work had stopped on the third prototype, BV 155 V3, as Blohm + Voss concentrated on finishing the V2, but the war ended first. The British Army occupied Hamburg on 3 May 1945 and found the three prototypes at the factory. British officials examined the V1 and decided it was airworthy then directed an RAF pilot to fly it to England. The airplane crashed shortly after takeoff from the factory and was destroyed. The British gathered up V2 and V3 and shipped them to the test establishment at Farnborough, England, for evaluation. They seriously considered completing the V2 for flight test but in the end, simply displayed the aircraft in October-November 1945 and then stored it.



Blohm + Voss Bv 155B V2, USA FE-505, in storage at the Garber Facility, Paul E. Garber Facility in Silver Hill, Maryland. (NASM Photo)

For years, the identification of the National Air & Space Museum's Bv 155B was mysterious. Historians knew the British shipped a Bv 155B to the US after the war and that the US Army Air Forces evaluated it at Wright Field, Ohio. They eventually transferred it (bearing Foreign Equipment Number FE-505) to the National Air & Space Museum. Most sources claimed this was the unfinished V3 prototype. In 1998, two restoration specialists reassembling the parts stored at the Paul E. Garber Facility in Silver Hill, Maryland, were amazed to discover nearly the entire V2 airframe. Except for wiring harnesses the factory never hooked up and other small parts, the aircraft appears to be 90-95% complete, including most of the propulsion system. German documents verify that the V3 was only half-finished at war’s end and the discovery of “V2” stamped into both sides of the windshield frame seemed to prove conclusively that the NASM aircraft is in fact the second prototype. The BV 155B V-2, (Wk. Nr. 360052) in the NASM is also the last surviving aircraft built by Blöhm und Voss during the company’s 12-year foray into aviation.



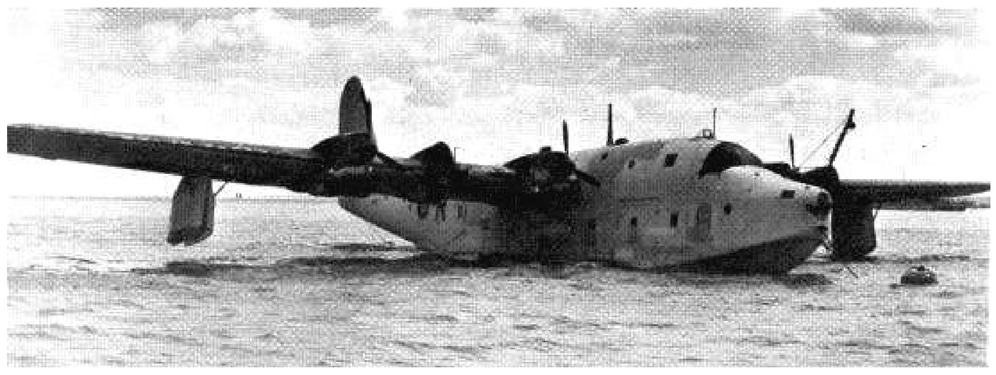
Blohm + Voss Bv 222 Wiking in flight. (Luftwaffe Photo)

Blohm + Voss Bv 222 Wiking

Three Blohm + Voss BV 222 Wikings were captured and subsequently operated by Allied forces: C-011, C-012, and C-013. C-012, captured at Sørreisa in Norway after the war along with V2, was flown by Captain (N) Eric Brown from Norway to the RAF station at Calshot in 1946, with RAF serial number VP501. After testing at Marine Aircraft Experimental Establishment at Felixstowe it was assigned to No. 201 Squadron RAF, who operated it up to 1947, when it was scrapped.

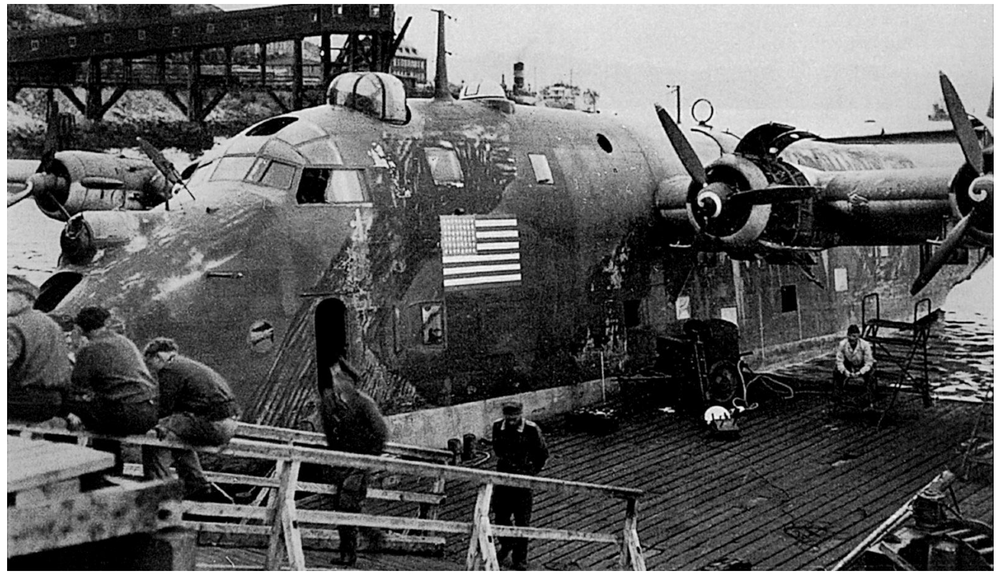






Blohm & Voss BV 222 Wiking, RAF C-012, (Wk. Nr. 330052), RAF VP501, R. (RAF Photos)

Blohm + Voss BV 222 *Wiking*, transport flying-boats. Several were flown by the RAF. The white aircraft marked R is Bv 222C-012 (Wk. Nr. 330052), RAF VP501, captured at Sorreisa in northern Norway. None of these aircraft have survived. (RAF Photos)



Blohm + Voss BV 222 *Wiking*, transport flying-boat with American flag, designated USA C-011 or C-113, Trondheim Fjord, 27 Aug 1945. (USN Photo)







Blohm + Voss BV 222 seaplane at Trondheim, Norway, undergoing tests by the U.S. Navy, ca 1945-46. This aircraft is one of two flown by the USN, designated USA C-011 and C-113. (USN Photos)

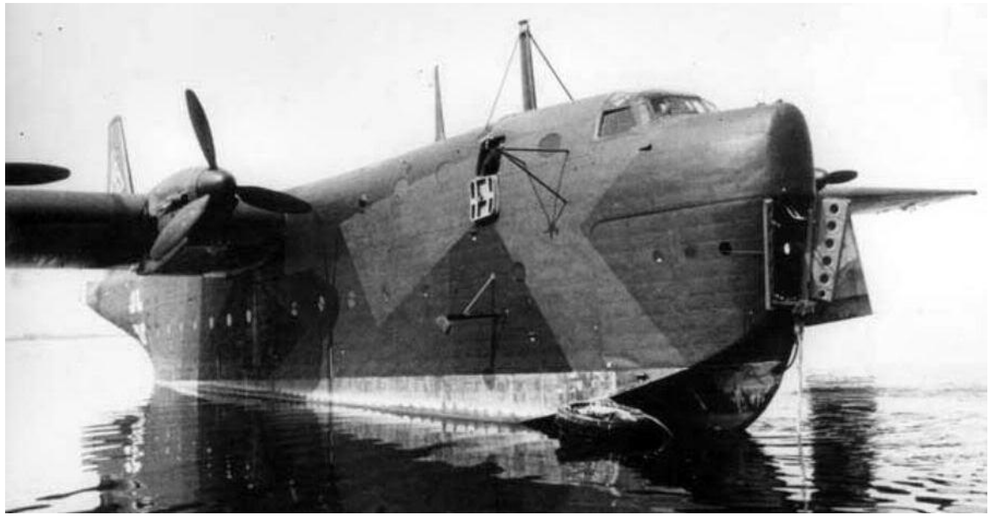
BV 222, USA C-011 and C-013 were captured by US forces at the end of the Second World War. On 15 August and again on 20 August 1945, LCdr Richard Schreder of the US Navy performed test flights along with the Luftwaffe crew of one of the Bv 222 Wiking aircraft that had been acquired by the US. In two flights resulting in a total flight time of 38 minutes they experienced 4 engine fires. While many spare engines were available they were of substandard quality due to the lack of quality alloys near the end of the war, and caught fire easily. Since the aircraft was unairworthy with these engines, the aircraft was supposedly taken out to open water and sunk by a Navy Destroyer.

Other reports indicate the US captured aircraft were flown or shipped to the US. Convair acquired one for evaluation at the Naval Air Station Patuxent River, the intensive studies leading to the hull design of their Model 117 which in turn led to the R3Y Tradewind. Their subsequent fate is unknown. The V2 aircraft briefly wore US markings in 1946. Strangely the V2 aircraft had identification markings given to her from the original V5 aircraft for Operation Schatzgräber.

V2 was later scuttled by the British who filled her with Bv 222 Wiking spare parts from the base at Ilsvika to weigh her down. V2 was towed to a position between Fagervika and Monk's island where it is thought she now rests perfectly preserved on the seabed, owing to low oxygen levels in the water. There are plans to raise and restore this aircraft.







Blohm + Voss BV 238, flying-boat (prototype). (Luftwaffe Photos)

Blohm + Voss Ha 140 torpedo bomber flying-boat (prototype).





Bücker Bü 131 *Jungmann*, biplane trainer on display in the Fantasy of Flight Museum, Polk City, Florida. (Author Photos)

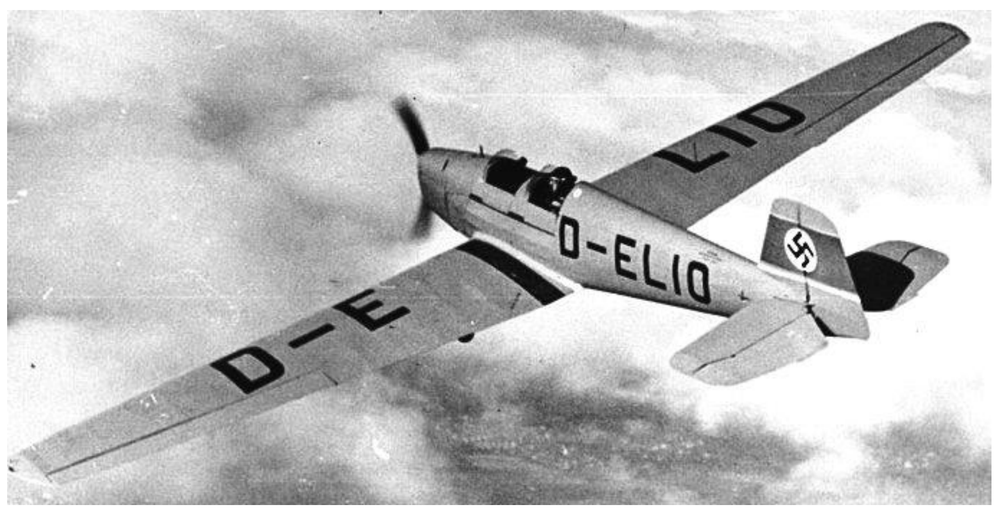
Bücker Bü 131 *Jungmann*, biplane trainer (Wk. Nr. 4477), GD+EG of Luftdienst, RAF DR626, seerved with the RAF Telecommunications Flying Unit (TFU) until it was struck off charge in Nov 1941.



Bücker Bü 133C *Jungmeister*, aerobatic biplane trainer, on display in the Fantasy of Flight Museum, Polk City, Florida. (Author Photo)



Bücker Bü 133C *Jungmeister*, aerobatic biplane trainer, on display in the Deutsches Museum, Flugwerft Schleißheim, Germany. (Andreas Fränzel Photo)



Bücker Bü 180 *Student*, trainer. (Luftwaffe Photo)

Bücker Bü 181 *Bestmann*, trainer and light transport (Wk. Nr. unknown), captured at Husum. Designated RAF AM121, this aircraft was likley scrapped at Woodley, England.

Bücker Bü 181C-3 *Bestmann*, trainer and light transport (Wk. Nr. 120417), captured at Husum. Designated RAF AM121, this aircraft held Reg No. G-AKAX until it was scrapped at Denham, England in 1950.



Bücker Bü 181 *Bestmann*, trainer and light transport on display in the Fantasy of Flight Museum, Polk City, Florida. (Author Photo)



Bücker Bü 181 *Bestmann*, armed for the "*tank busting*" role carrying four Panzerfaust anti-tank grenade launchers from wing-mounted launchers (C-3 subtype). (Luftwaffe Photo)



(Valder137 Photo)



(Simmon Boddy Photo)

Bücker Bü 181 *Bestmann*, trainer and light transport on display in the Deutsches Museum, Flugwerft Schleißheim, Germany.

Bücker Bü 181 Bestmann

The Bücker Bü 181 Bestmann was a two-seater, single-engine aerobatic monoplane aircraft built by Bücker Flugzeugbau GmbH in Rangsdorf, near Berlin and extensively used by the Luftwaffe in the Second World War. Over 4,000 Bü 181s were built. Only about 10 examples remain, none in flying condition.

The Bücker Bü 181 was named *Bestmann* after a German maritime term designating a member of the deck crew on coastal or fishing vessels. The prototype Bü 181 (D-ERBV) made its maiden flight in February 1939 with Chief Pilot Arthur Benitz at the controls. After official flight testing by the Reichsluftfahrtministerium (RLM) the Bü 181 was nominated to be the standard primary trainer for the Luftwaffe. Series production of the Bü 181 commenced in 1940. The production types were designated B to C with only slight variations between each, and could be powered by the Hirth HM 500 A or B.

Although built primarily as a trainer for the Luftwaffe, the type also performed other duties such as courier & liaison. From March 1945 an order was issued to concentrate all the available Bü 181s to be converted either to the "*tank busting*" role carrying four Panzerfaust anti-tank grenade launchers from wing-mounted launchers (C-3 subtype), or to the night harassment role carrying three 50 kg bombs (B-3 subtype), most likely inspired by the Soviet female nocturnal *Nochnye Vedmy* units' campaigns from 1942 to V-E Day. These units saw very limited use in the final days of the war due to the war situation. However, some missions were carried out, achieving moderate success but at the price of severe losses. One restored Bestmann in the tank buster configuration is on display at the Deutsches Technikmuseum Berlin. Test pilot, and sister-in-law of Claus von Stauffenberg, Melitta Schenk Gräfin von Stauffenberg was flying a Bücker Bü 181 when she was shot down and fatally wounded in 1945.

The RAF flew two, Bücker Bü 181 Bestmann, (Wk. Nr. unknown), RAF AM121, captured at Husum and believed to have been scrapped at Woodley in England, and Bücker Bü 181C-3, (Wk. Nr. 120417), RAF AM122, also captured at Husum, Reg. No. G-AKAX, scrapped at Denham, England in 1950.





Bücker Bü 181 *Bestmann*, trainer and light transport, possibly USAF FE-4611, later T2-4611, or FE-4612, Freeman Field, Indiana, ca 1945. FE-4611 is preserved in the NASM Paul E. Garber facility, Suitland, Maryland, and FE-4612 was scrapped at Freeman Field in 1946. (USAAF photos)

Two were brought to the USA, Bücker Bü 181 Bestmann, (Wk. Nr. unknown), USA FE-4611, now on display in the NASM's Garber facility, and FE-4612, which was scrapped at Freeman Field in 1946.



Bücker Bü 182 *Kornett*, trainer (prototype). (Luftwaffe Photo)



DFS 108-49 Grunau Baby glider, (Wk. Nr. 031016), designated USA FE-2600, later T2-2600, at Freeman Field. (US National Archives Photo 80G-4Z0983)

DFS 108-49 Grunau Baby glider, (Wk. Nr. 031016), shipped to the USA where it was designated USA FE-2600, later T2-2600. This aircraft-NC, is on display in the NASM, Washington, D.C.

DFS 108-49 Grunau Baby glider, (Wk, Nr. possibly 030240), FE-2601 was sold as a surplus aircraft, possibly Reg. No. N69720.



DFS 108-14 Schugleiter SG38. (Richard Peter, Deutsche Fototek)

DFS 108-14 Schugleiter SG38, USA FE-5004 was scrapped at Freeman Field in 1946.

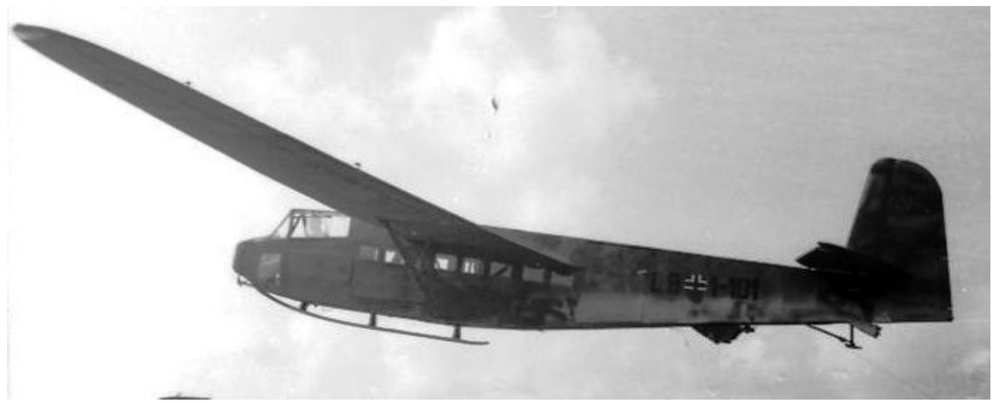
DFS 108-14 Schugleiter SG38 FE-5005 was last reported at Wright Field in 1948, subsequent fate unknown but possibly in storage with the NASM.



DFS 230 Glider, Italy. (Bundesarchiv Photo, Bild 101I-567-1519-18)



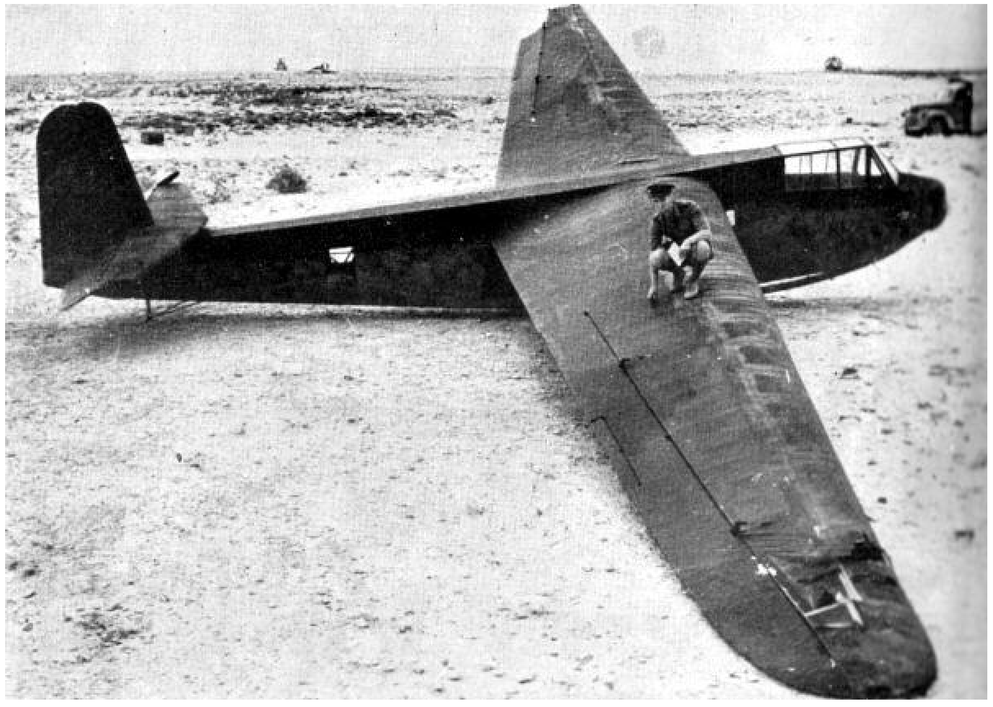
DFS 230 Glider, Gran Sasso, Italy. (Bundesarchiv Photo, Bild 101I-567-1503A-02)



DFS Glider in flight, Italy. (Bundesarchiv Photo, Bild 101I-568-1530-13)

DFS 230 Glider

The DFS 230 Glider was a Luftwaffe transport glider operated by the Luftwaffe. It was developed in 1933 by the Deutsche Forschungsanstalt für Segelflug (DFS - “German Research Institute for Sailplane Flight”) with Hans Jacobs as the head designer. The glider was the German inspiration for the British Hotspur glider and was intended for paratrooper assault operations. The glider could carry 9 soldiers with equipment or a payload of about 1,200 kg. The usual tug was a Ju 52 but tugs included Ju 87 and Ju 88 tow planes. They were used in the airborne assault landings at Fort Eben-Emael and Crete, as well as in North Africa and in the rescue of Benito Mussolini and for supplying the defenders of *Festung Budapest*, until 12 February 1945.

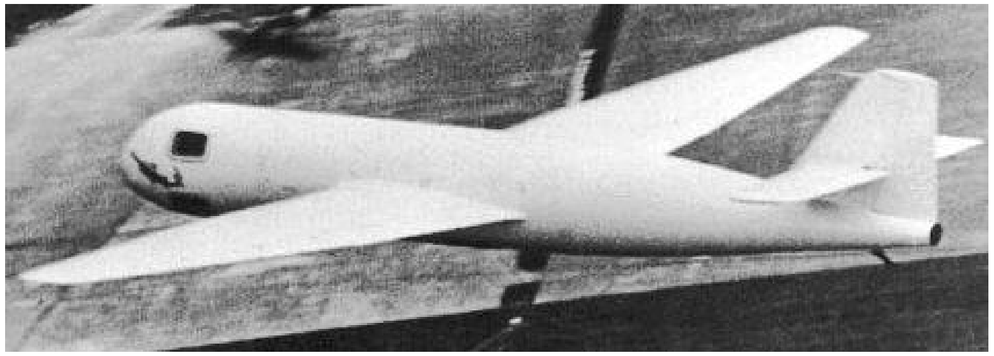


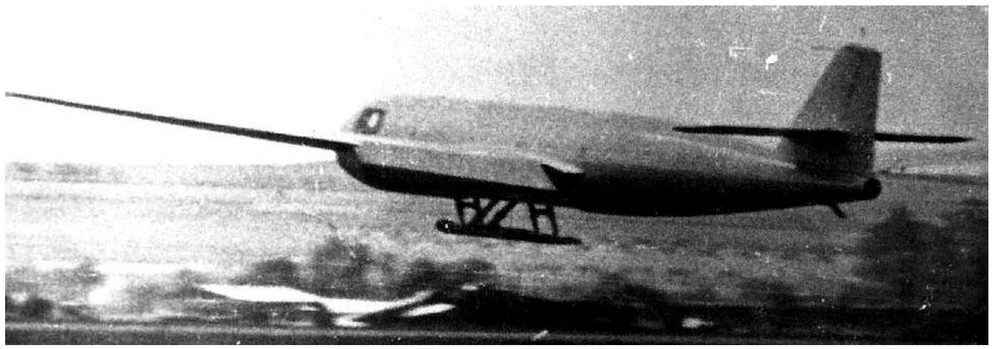
DFS 230 Glider captured by the RAAF. (RAAF Photo)

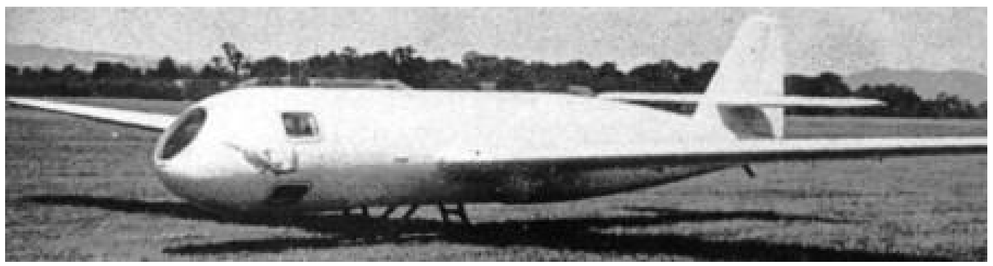
One DFS 230 was captured by the Royal Australian Air Force. One DFS 230C, (Wk. Nr. 36-16) fuselage frame is with the Museum fur Verkher und Technik, Berlin. DFS 230A-2, (Wk. Nr. 120-02), KA+1-52 is on display in the Luftwaffen Museum der Bundeswehr, Berlin-Gatow, Germany (this aircraft is a replica containing original parts). The airframe remains of a DFS 230C-1 are preserved in a museum in Banja Luka, and another is in the Historical Museum, Sarajevo, both in Bosnia-Herzegovina. A DFS 230C-1 fuselage frame is on display in the Military Museum, Belgrade, Former Yugoslav Republic. This glider participated in the raid on Marshal Tito's partisan headquarters. An original restored DFS 230A-2 fuselage is on display in the Eben Emael Fortress Museum, Belgium. Parts of a DFS 230 fuselage frame are in a private collection/War Museum in Sfakia on the Island of Crete, Greece. A nearly complete fuselage is on display in the Musée de l'Air, France. This glider's remains were recovered from Vassieux en Vercors. Parts of several different DFS 230C-1 are with the Musée de la Résistance du Vercors, Champigny-sur-Marne near Paris and the Ailes Anciennes in France. A DFS 230 fuselage frame was recovered from a mountain in Norway and is being preserved for a museum.



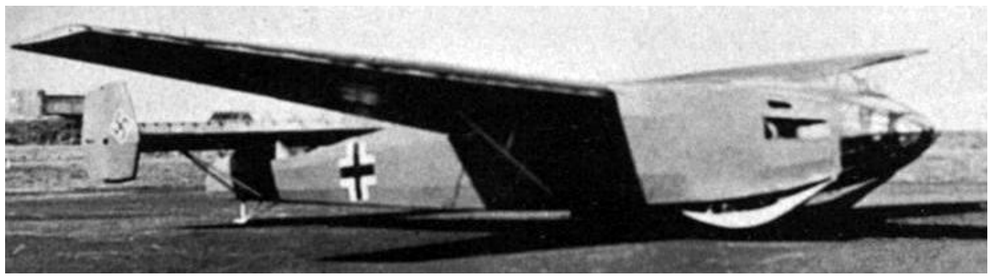
DFS 230A-2, (Wk. Nr. 120-02), KA+1-52, replica containing original parts on display in the Luftwaffen Museum der Bundeswehr, Berlin-Gatow, Germany. (MisterBee1966 Photo)

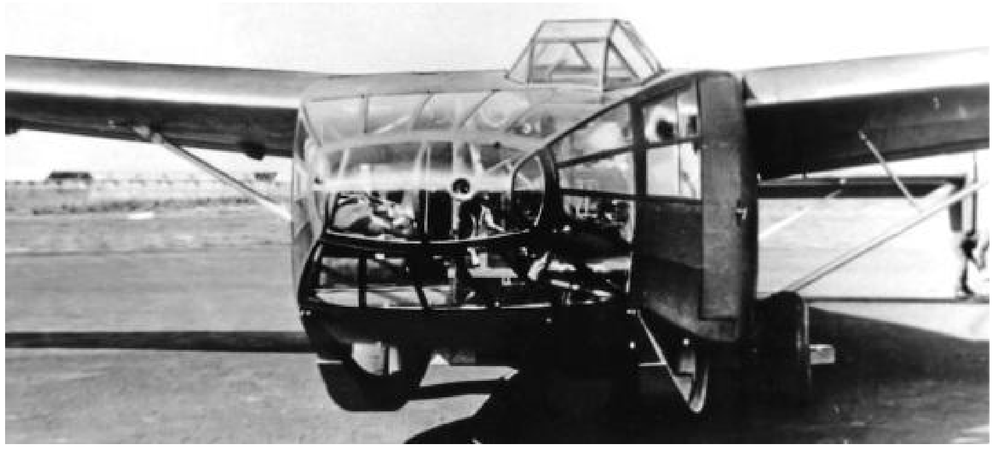


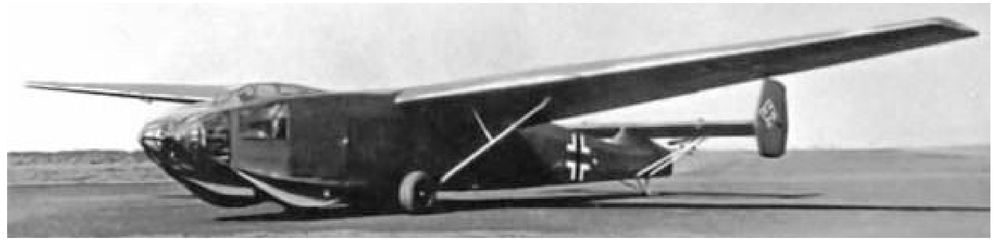




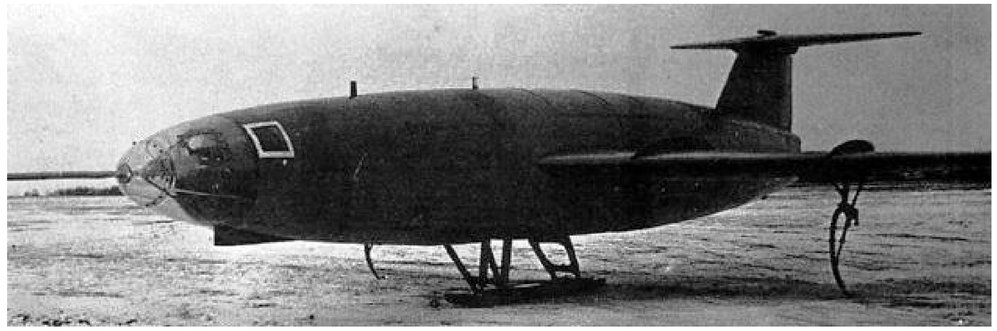
DFS 228, rocket-powered reconnaissance aircraft (prototype). (Luftwaffe Photos)

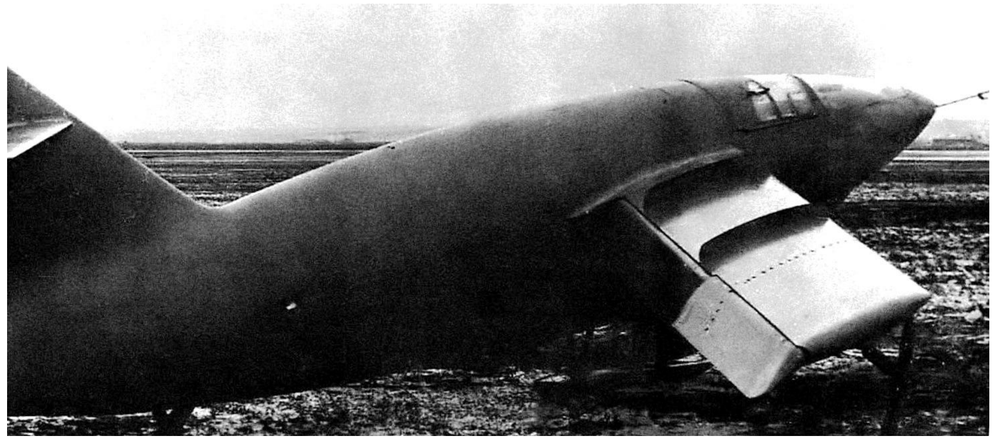




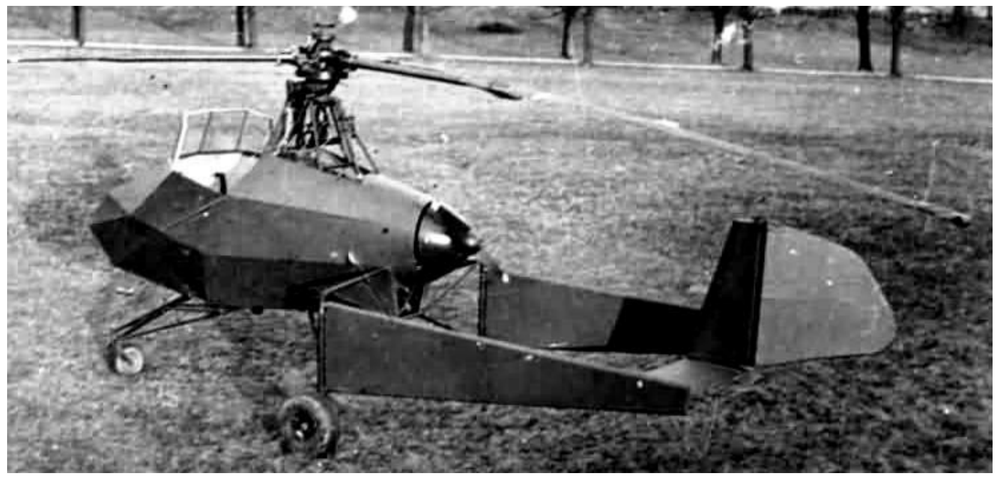


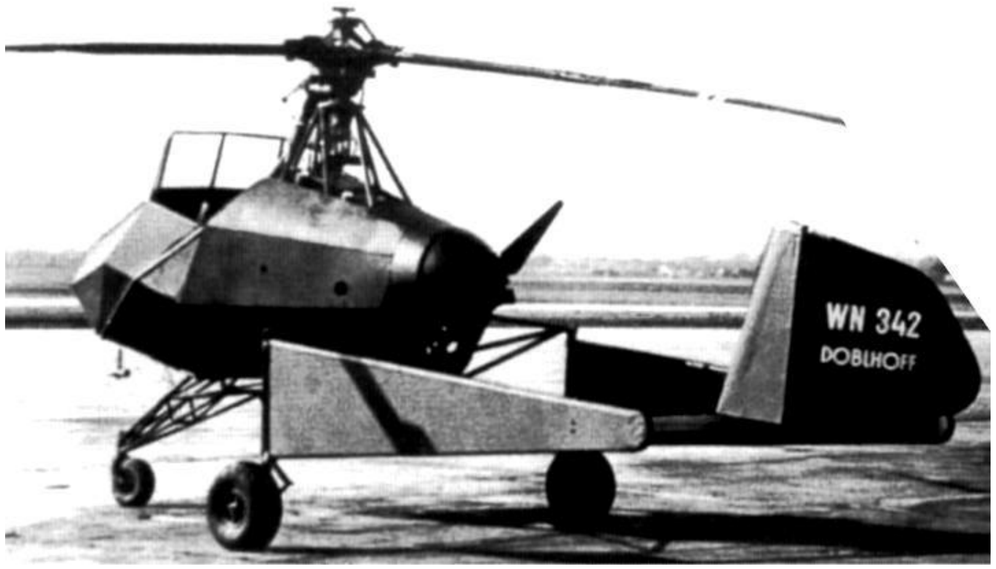
DFS 331, transport glider (prototype). (Luftwaffe Photos)





DFS 346, rocket-powered reconnaissance aircraft (project completed by Soviets). (Soviet Air Force Photos)







Doblhof WNF 342V-4 helicopter, USA FE-4615, later T2-4615. This helicopter was sent to General Electric, Schnectady, New York, last reported in 1949. (NARA Photos)

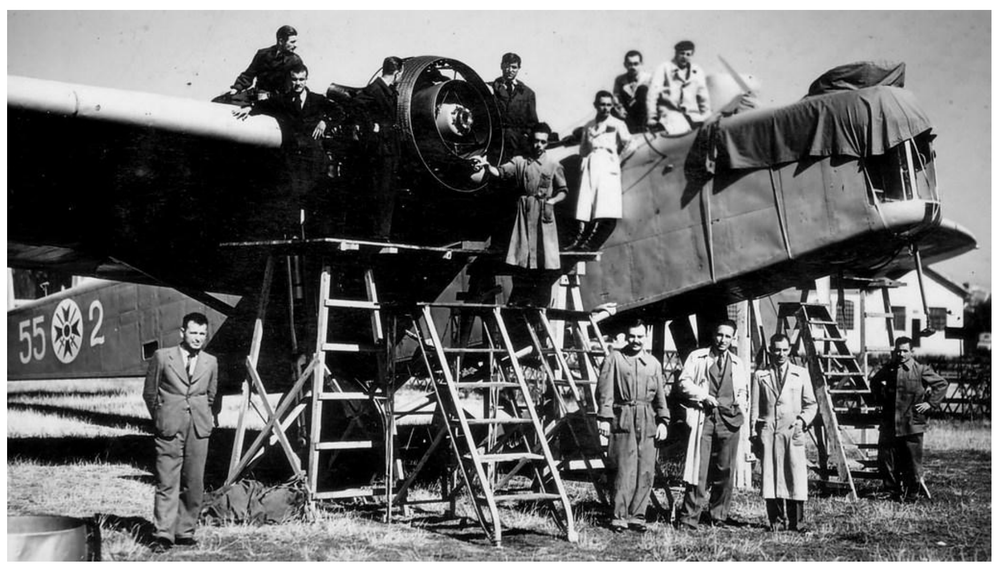
Doblhof WNF 342V-4 helicopter

The Doblhof WNF 342V-4 helicopter was the fourth prototype constructed by Friedrich von Doblhoff as the world's first tip jet powered helicopter. This helicopter used a seven cylinder Sh 14A radial engine that had powered an earlier model designated the V3. All four Doblhof prototypes used an Argus As 411 supercharger as an air compressor. The V4 was a two-seat version with a faired fuselage (the prototypes were all single seat). The helicopter was designed with a twin boom layout and had a single vertical stabilizer mounted on top of a horizontal tail that ran between the booms. The V4 had a gross weight of 1411 pounds and a rotor diameter of 32.68 feet. Testing of the WNF 342 V4 took place in the spring of 1945, with 25 hours of flying conducted before the war ended. As the Soviet Army approached Vienna on 3 April 1945, the engineers and mechanics loaded the WNF 342 V4 onto a trailer and drove West for 12 days on roads overcrowded with other refugees until they encountered the American forces. The German design team was the team was interrogated by Allied intelligence and engineering officers, and then the V4 prototype was crated and shipped to the USA for further evaluation. Friedrich von Doblhoff went to work for McDonald Aircraft, becoming their chief helicopter engineer and and worked on the McDonald XV-1 convertiplane and the McDonald model 120 flying crane which both used the jet rotor and the pusher propeller. Theodor Laufer who had done the detailed design of the jet rotor went to work for France's Sud Aviation, where he was responsible for the Djinn (Genie) jet helicopter. A. Stefan who had done the structural design and most of the test flying of the WFN 342s, joined Fairey Aviation in great Britain and contributed in the design of several jet rotor aircraft including the Fairey Gyrodyne helicopter and the giant 48 passenger Fairey Rotodyne convertiplane.



Dornier Do 10 (Do C1) 1931 biplane fighter (prototype). (Luftwaffe Photo)





Dornier Do 11, (Do F) 1931 medium bomber. Second photo is of a Do 11 in service with the Bulgarian AF. (Luftwaffe Photos)







Dornier Do 12 *Libelle* seaplane. (Luftwaffe Photos)



Dornier Do 13, 1933 medium bomber (prototype). (Luftwaffe Photo)





Dornier Do 14, seaplane (prototype). (Luftwaffe Photos)



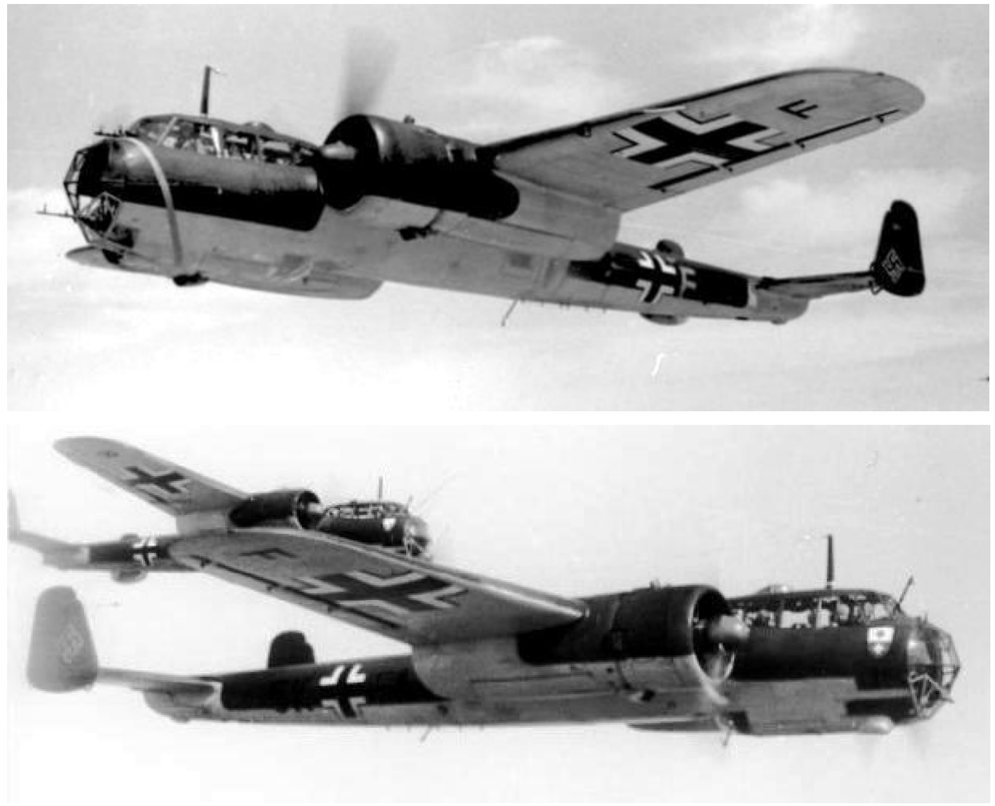
(Dornier Museum Friedrichshafen Photo)

Dornier Do 16 *Wal*, reconnaissance flying-boat. Replica of the Dornier Wal N25 at the Dornier Museum Friedrichshafen.



(Jesús Manuel Cuartero Photo)

and a Dornier Plus Ultra in the el Complejo Museográfico Provincial "Enrique Udaondo" de Lujan, Argentina.



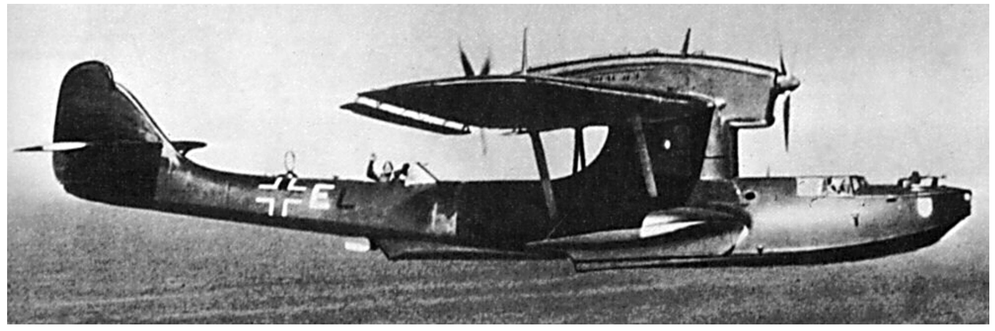
Dornier Do 17, *Fliegender Bleistift*, mail-plane/bomber/reconnaissance/night-fighter. (Luftwaffe Photos)



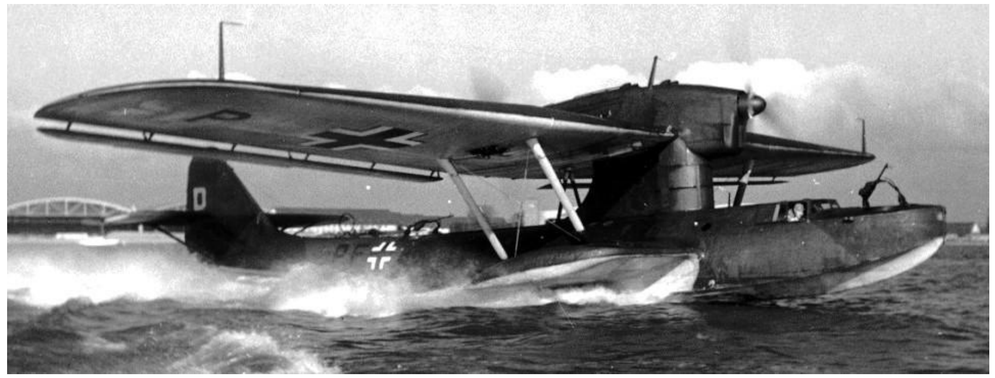
Dornier Do 17E-2, (Wk. Nr. 2095), shipped to the USA, where it was designated USA FE-2000, later T2-2000. It was named "*Axis Sally*". This aircraft was scrapped in Sep 1946. (USAAF Photo)



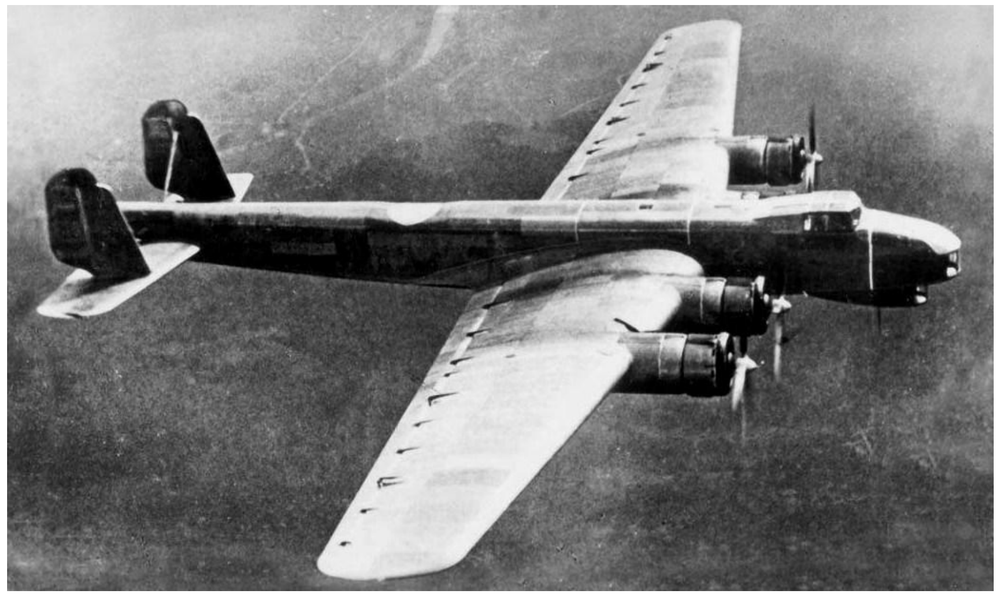
Dornier Do 17Z, (Wk. Nr. 1160), coded 5K+AR, from III./KG3, has been recovered from the sea off the English coast. On 26 August 1940, 5K+AR was taking part in a raid by KG2 and KG 3, targeting the RAF stations. While flying over clouds, the aircraft became separated from the bomber formation and lost its bearings; it was then attacked by Boulton-Paul Defiant fighters of RAF No. 264 Squadron. One of the Dornier's engines was disabled and the other damaged, so the wounded pilot, *Feldwebel* (Flight Sergeant) Willi Effmert, elected to make a crash landing on the Goodwin Sands. He and another crew member survived and were taken prisoner. The other two crew were killed. The aircraft was raised on 10 June 2013, and taken to RAF Cosford where it is being restored. (Luftwaffe Photo)

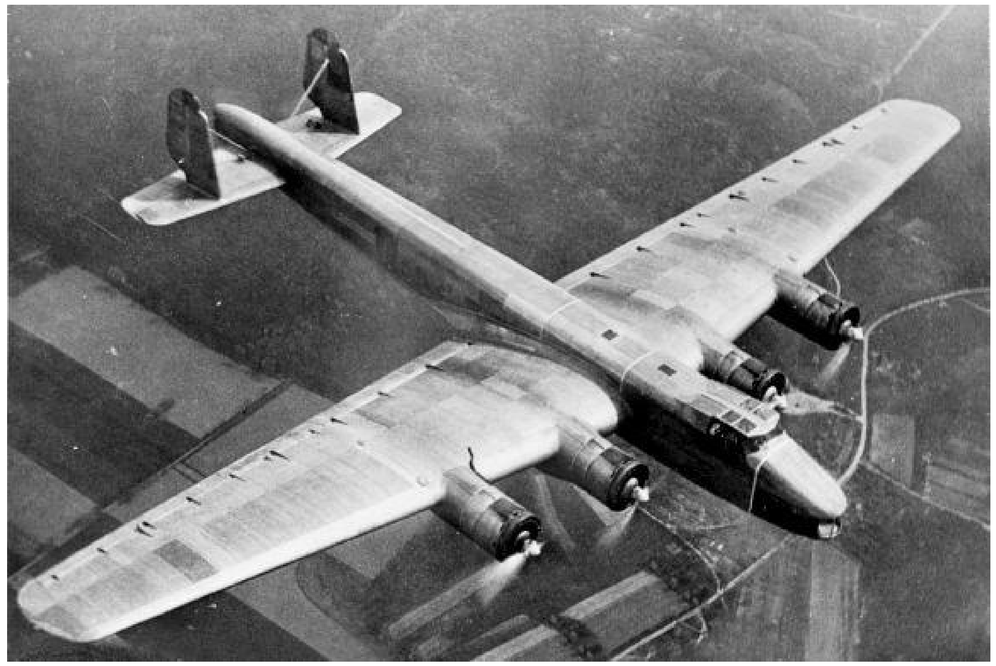


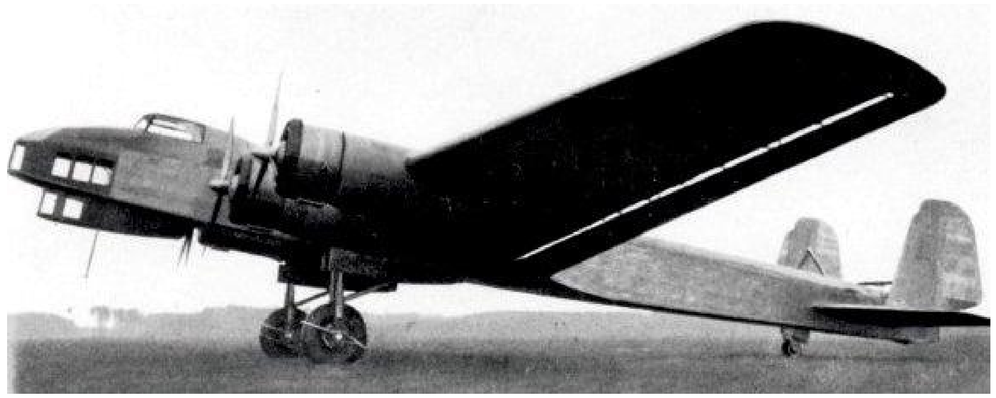


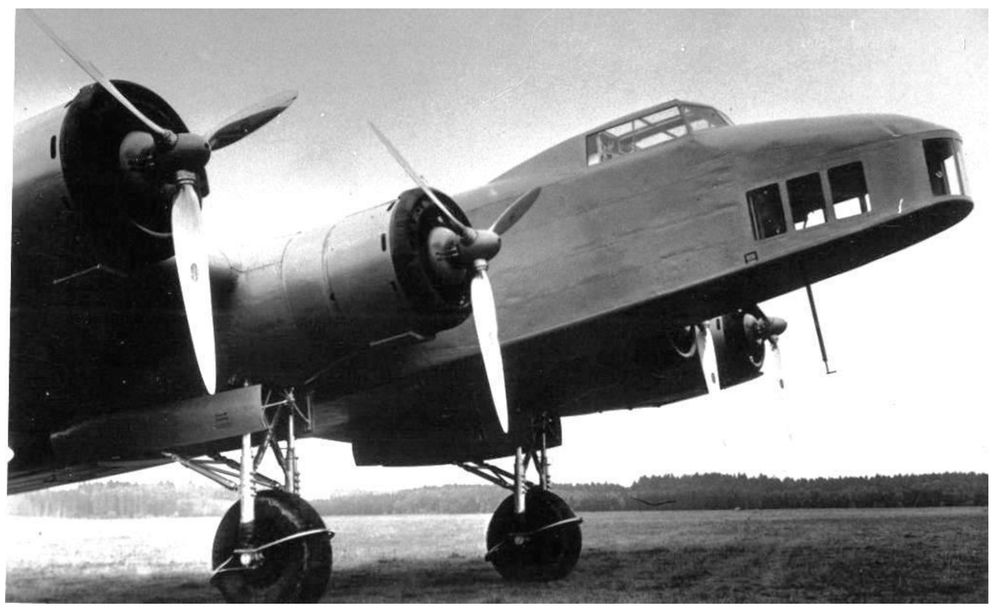


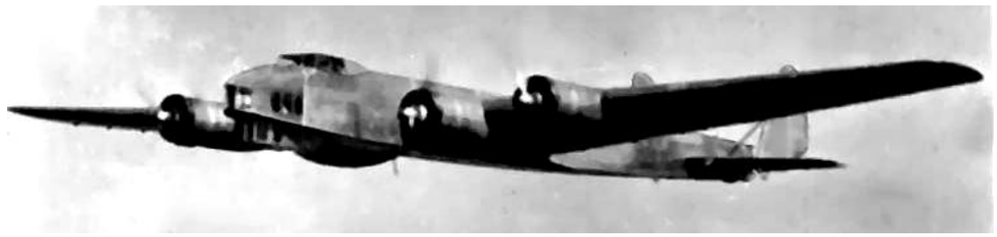
Dornier Do 18, 1935 bomber/reconnaissance flying-boat. (Luftwaffe Photos)

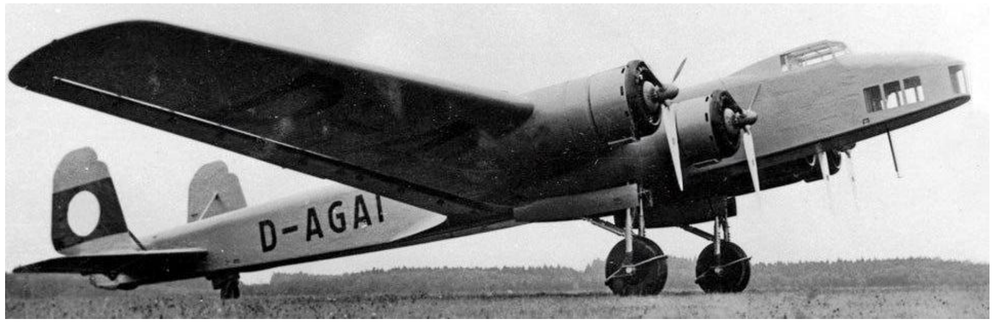












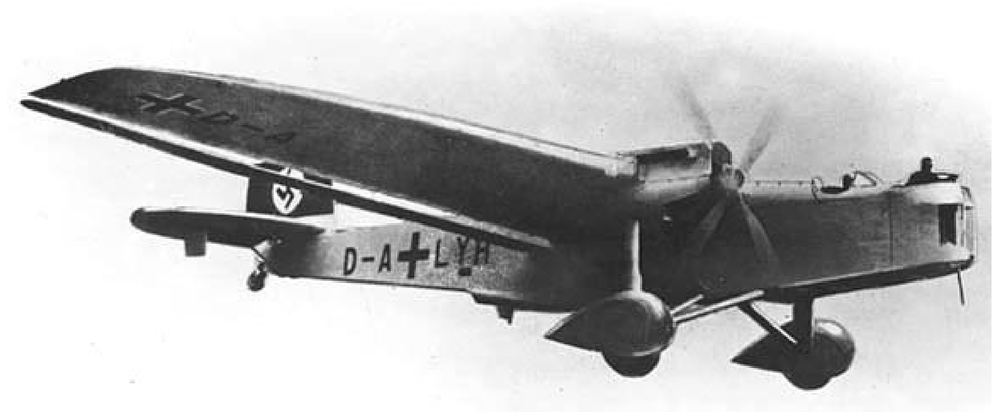
Dornier Do 19, *Ural Bomber* design competitor (prototype). (Luftwaffe Photos)



Dornier Do 22, torpedo bomber/maritime reconnaissance, Do 22K at Helsinki-Malmi airport, Finland. (Sot.virk. Niilo Helander Photo)



Dornier Do 22Kj, (Wk. No. 306). A Do 22Kj (Wk. Nr. 309) of the Yugoslav Naval Air Service defected to the Allies. Designated RAF AX712, it flew on anti-submarine patrols. (Australian War Memorial Collection Photo MED0321)



Dornier Do 23, medium bomber. (Luftwaffe Photo)



Dornier Do 24T-3 seaplane on the water. (Luftwaffe Photo)

Dornier Do 24

The Dornier Do 24 was a Luftwaffe air-sea rescue and transport flying boat powered by three BMW-Bramo 323R-2 Fafnir nine-cylinder radial engines. With 1,000 hp each for takeoff. It had a maximum speed of 206-mph, a service ceiling of 24,605', and a range of 2,920 miles. It weighed 20,723 lbs empty and could be loaded to 40,565 lbs. Its wingspan is 88'7", its length is 72'4" and its height is 18'10". It was armed with one 7.9-mm MG 15 machinegun in the bow and in the stern turrets and one 20-mm Hispano Suiza 404 cannon in a dorsal turret.





Dornier Do 24, reconnaissance bomber flying boat in Luftwaffe service. (Luftwaffe Photos)



(Stahlkocher Photo)

A fuselage of a Dornier Do 24T-3 at the "Technik Museum Speyer", Speyer, Rhineland-Palatinate, Germany. It was salvaged from Lake Müritz, Germany, in 1991.



(Happy Days Photo)

Dornier Do 24T-3, (Wk. Nr. No. 5342), coded X-24, formerly EC-DAF, is on loan to the Militaire Luchtvaart Museum in the Netherlands from the RAF Museum, Hendon, UK.

One Do 24T-3, (Wk. Nr. No. 3387), coded KS+FA, 65-11, N99222, is preserved in the Deutsches Museum, Flugwerft Schleißheim, Germany. This aircraft is displayed in Spanish AF SAR. Its wings are from another Do 24, (Wk. Nr. 5345).

Do 24T-3, (Wk. Nr. 5341), coded HD.5-2, 99240, is displayed in the Museo del Aire, Madrid, Spain.

Do 24ATT (T-3), (Wk. Nr. 5345), coded R-C2403) has been completely restored and is now flying actively. It was bought by SeaAir Inc. to be used as executive aircraft in the Philippine Archipelago. It was previously on show at Deutsches Museum Munich, and was the prototype for the Do ATT with 3 PT-6A turboprops. There are partial remains of other Do 24s in other museums in Australia, France and Germany.

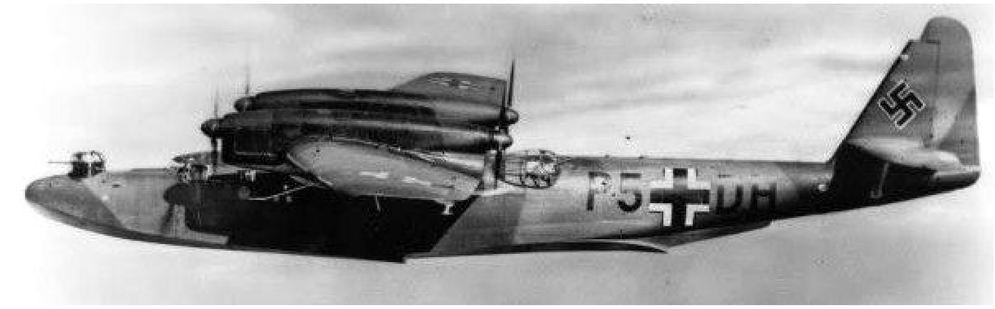
Dornier Do 24T-3, (Wk. Nr. unknown), AM115, was test flown by RCAF S/L Ian Somerville on 16 July 1945 at Schleswig-See. This aircraft was allocated RAF Serial No. VM483 on 2 October 1945 while in service with the Royal Aircraft Establishment's Foreign Aircraft Flight at Farnborough, UK at the end of the war.



Dornier Do 24 (Wk. Nr. unknown) in Soviet Air Force markings. (Soviet Air Force Photo)

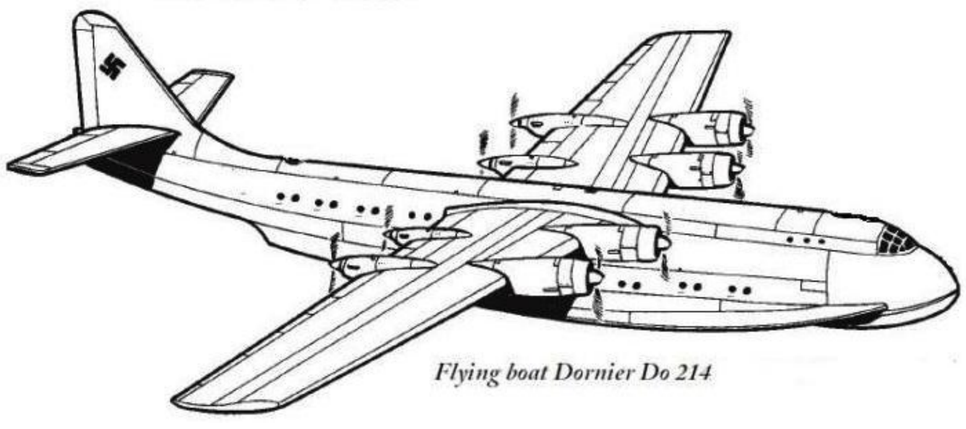




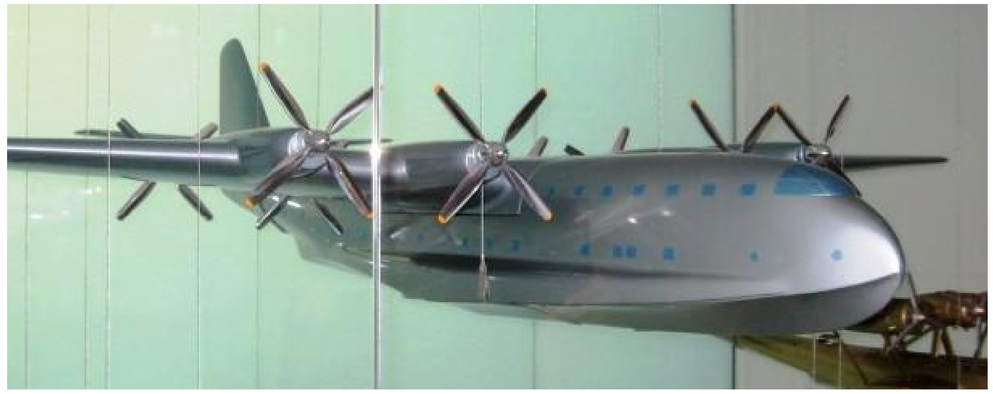




Dornier Do 26, long-range seaplane in Luftwaffe service. (Luftwaffe Photos)

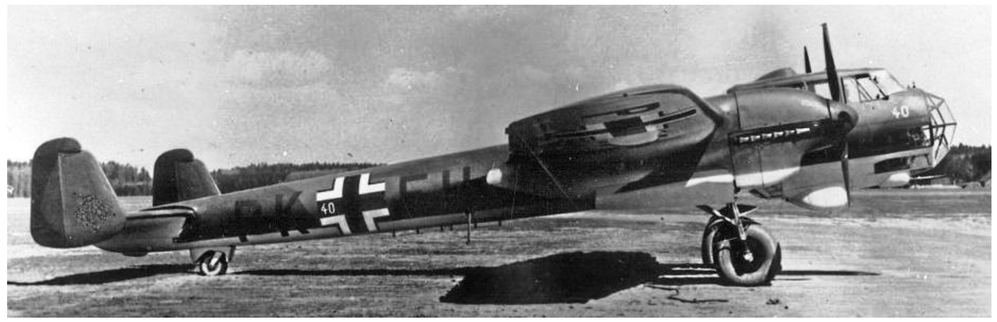


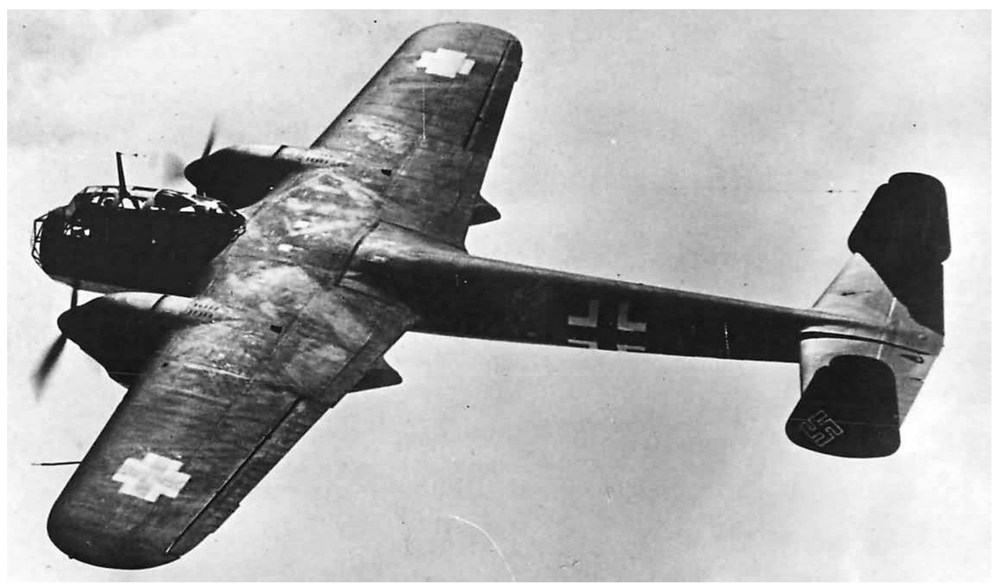
Dornier Do 214, transport flying-boat (project). (Luftwaffe diagram)

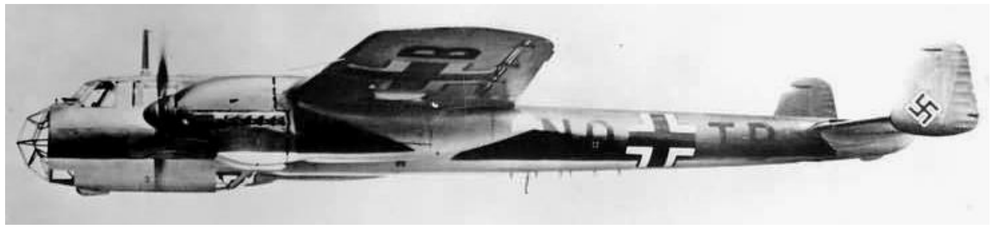

(Hadhuey Photo)

Dornier Do 214, transport flying-boat (project), model.

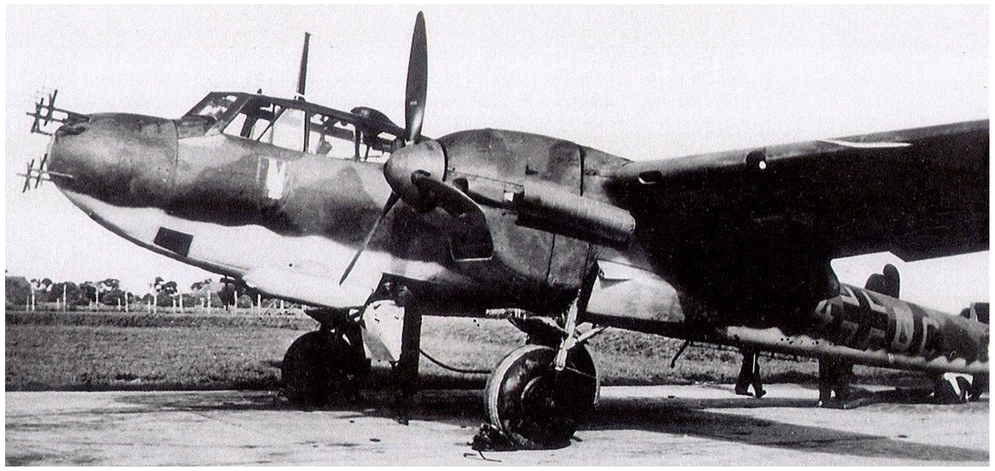




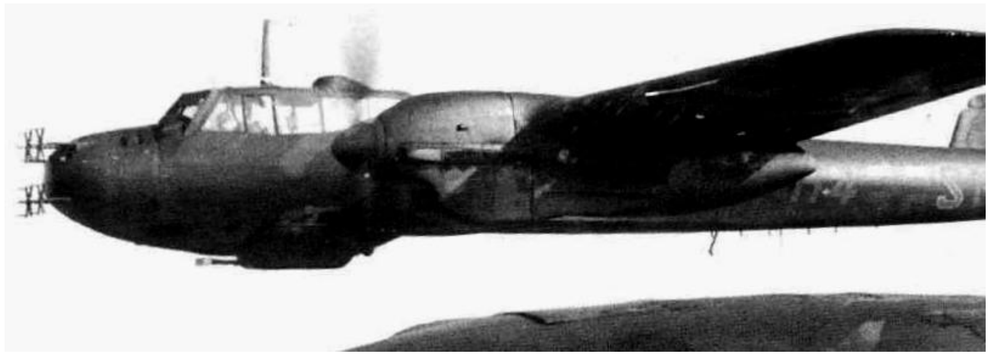




Dornier Do 215, bomber/night-fighter. (Luftwaffe Photos)



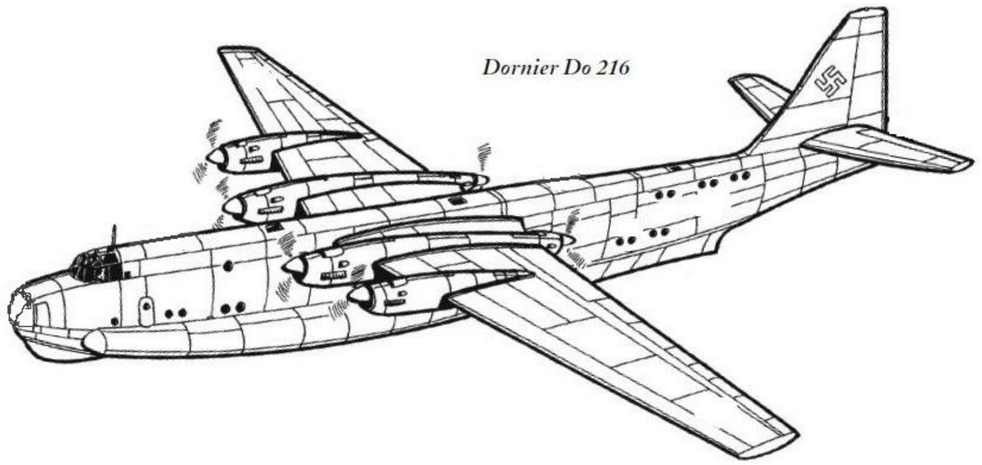
Dornier Do 215B II.NJG2 (R4+DC) Leeuwarden 1942. (Luftwaffe Photo)



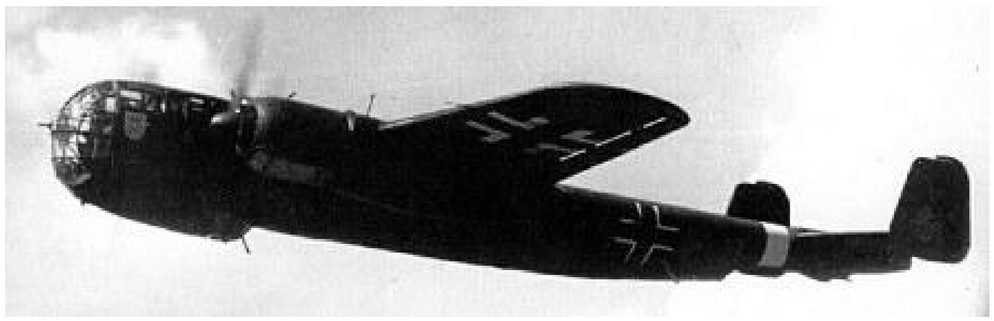
Dornier Do 215J (H4+SN). (Luftwaffe Photo)



Dornier Do 215, Soviet markings. (Soviet Air Force Photo)



Dornier Do 216, transport flying-boat (project). (Luftwaffe diagram)



Dornier Do 217M-1, Luftwaffe. (Luftwaffe Photo)

Dornier Do 217M

The Do 217M was a Luftwaffe twin-engine four-seat night-interceptor and intruder-fighter bomber. The aircraft was powered by two Daimler Benz DB 603A 1`2-cylinder liquid-cooled engines each rated at 1,750 hp for take-off and 1,850 hp at 6,889'. It had a maximum speed of 264-mph and a maximum cruising speed of 289-mph at 17,716'. Its service ceiling was 27,559' and its normal range was 1,090 miles. The aircraft weighed 30, 200 lbs empty and 43,607 lbs fully equipped. Its wing span is 52'4", its length is 62' and its height is 16'5". The Do 217N-2/R22 night fighter variant was armed with four MG 17 machineguns in the fuselage nose, four 20-mm MG 151 cannon in the lower nose and four 20-mm MG 151 cannon firing upwards from the central fuselage, tilted forward 70°.

The Do 217M was developed from the Do 217K-1 bomber which introduced by Dornier in the autumn of 1942. The Do 217K-1 had a new glazed nose incorporating an unstepped revised cockpit and defensive dispositions. The Do 217M-1 was essentially a Daimler-Benz DB 603A-powered version of the Do 217K-1, and the similar Do 217M-5 was equipped with an under fuselage rack for an Hs 293 missile. The Do 217M-3 was a DB 603A-engined equivalent of the Do 217K-3, and the Do 217M-11 was an extended-span missile-carrying equivalent of the Do 217K-2.

Production of all versions of the Do 217 totalled 1,730, and these aircraft were last used in large scale bombing operations against the UK in early 1944. By the middle of the year the majority remaining in service were missile carriers, and these continued to operate with limited success until the end of the war.

A Do 217M was abandoned by its aircrew over England on the night of 23 February 1944, but made a perfect belly-landing near Cambridge over 62 miles away from London. The aircraft was soon flying again in RAF markings.

RCAF S/L Joe McCarthy test flew Dornier Do 217M-1, (Wk. Nr. 56527), RAF AM106, while serving with the Royal Aircraft Establishment's Foreign Aircraft Flight at Farnborough, UK at the end of the war. Three examples had been selected for evaluation in the UK from a group captured at Beldringe, Denmark. Two arrived at Farnborough, AM106 (scrapped in 1945) and (Wk. Nr. 56158), AM107 (scrapped in 1955). A rear fuselage is all that survives from the remains of a Do 217 on display in the Italian Air Force Museum.

Dornier Do 217M, (Wk. Nr. unknown), selected for evaluation after capture at Beldringe, Denmark. This aircraft was designated RAF AM105. It was scrapped at Beldringe, England.

Dornier Do 217M-1, (Wk. Nr. 56527), selected for evaluation in England after capture at Beldringe, Denmark. This aircraft was designated RAF AM106. It was scrapped at Farnborough in 1946.





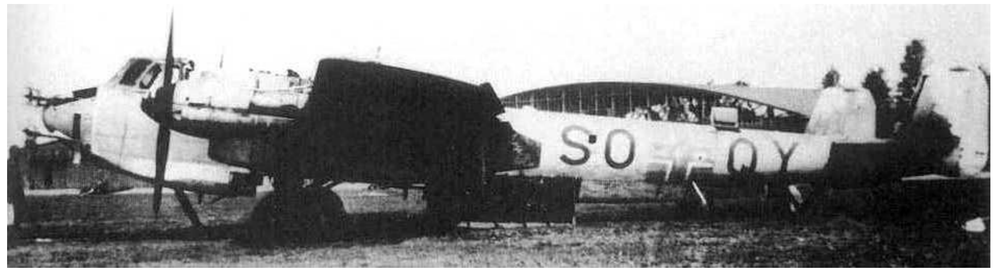
Dornier Do 217M-1, (Wk. Nr. 56158), RAF AM107, Farnborough. (RAF Photos)

Dornier Do 217M-1, (Wk. Nr. 56158), U5+, KG2, selected for evaluation in England after capture at Beldringe, Denmark. This aircraft was designated RAF AM107, 6158. It was scrapped at Bovingdon, England, in 1955. (RAF Photo)



Dornier Do 217M captured by the USSR in Soviet service. (Soviet Air Force Photo)



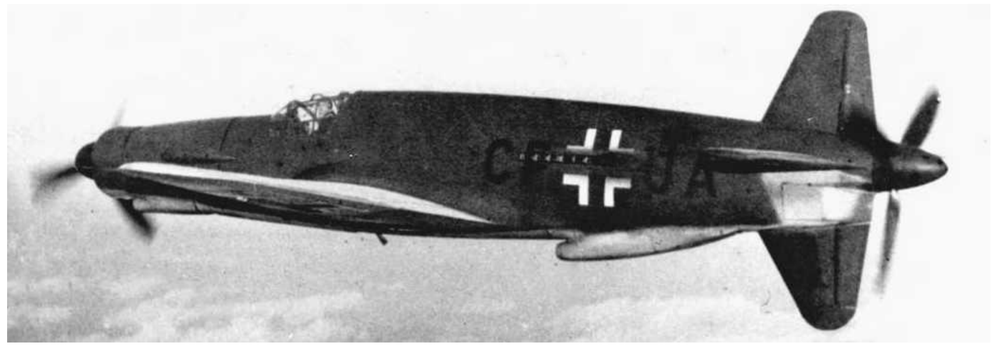


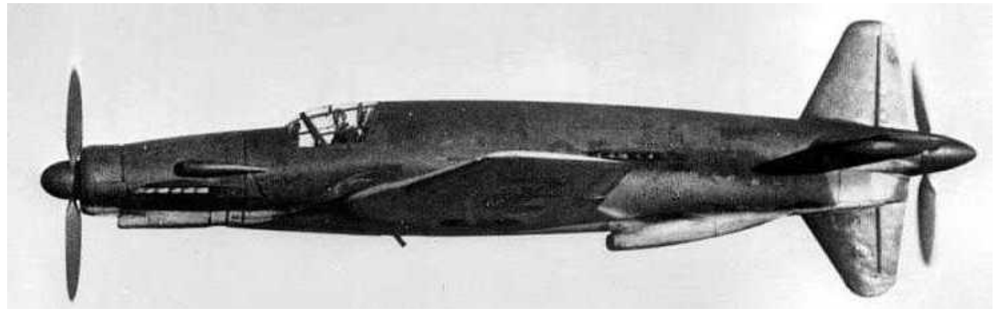
Dornier Do 217N-1 night-fighter coded SO+QY, captured by the USAAF in May 1945. (USAAF Photos)



Dornier Do 217M-9, (Wk. Nr. 0040), KF+JN, captured at Flensberg. Designated RAF AM7, this aircraft was modified with vertical tail fins and rudders later used in the Do 317. It was scrapped at Flensberg in 1945. (RAF Photo)

Dornier Do 317, *Bomber B* design competitor (prototype).





Dornier Do 335V-1 (Wk. Nr. 230001), first prototype, bearing the *Stammkennzeichen* (factory radio code) of CP+UA, first flew on 26 October 1943. (Luftwaffe Photos)

Dornier Do 335A Pfeil

The Dornier Do 335 was a Luftwaffe tandem twin-engine ground attack/close support fighter-bomber manufactured by Dornier-Werk GmbH. Models: A-1 (Single-seat fighter) & A-6 (Night fighter). It was armed with one 30 mm MK103 cannon with 70 rounds, firing through the front propeller hub, and two 15 mm MG151/15 cannon with 200 r.p.g. above the nose, plus one 1,102 lb (500 kg) bomb or two 551 lb (250 kg) bombs internally and 551 lb (250 kg) bombs on underwing racks. The Do 335 was powered by a pair of Daimler-Benz DB 603G 12-cylinder inverted-vee, liquid cooled engine with 1,900 hp each. It was equipped with two different propellers, type VDM, with a diameter of 3.50m (front), and 3.30m (rear). Fuel for the Do 335 is stored in two separate tanks behind the pilot's seat (port tank for forward engine and starboard tank for rear engine). It had a wing span of 45'4", a length of 13.8m (45'6") and a height of 5m (16'4"). The A-1 version weighed 16,314 lbs empty and 16,975 lbs loaded. The A-6 version weighs 25,800 lbs loaded. It has a maximum Speed of 664 kmh (413-mph) and a sustained speed of 768 kmh (477-mph) with emergency boost. Its range with maximum fuel is 2,060 km (1,280 miles), and with drop tanks 3,750 (2,330 miles).



Dornier Do 335V-2, (Wk. Nr. 230002), *Stammkennzeichen* CP+UB, with its engines being run up. This aircraft's rear engine caught fire and it was written off on 15 April 1944. (Luftwaffe Photo)

At least 16 prototype Do 335s were known to have flown, including V1–V12, (Wk. Nrs. 230001-230012) and *Muster*-series prototypes M13–M17, (Wk. Nrs. 230013-230017), on a number of DB603 engine subtypes including the DB 603A, A-2, G-0, E and E-1. The first preproduction Do 335 (A-0s) starting with (Wk. Nr. 240101), *Stammkennzeichen* VG+PG, were delivered in July 1944. Approximately 22 preproduction aircraft were thought to have been completed and flown before the end of the war, including approximately 11 A-0s converted to A-11s for training purposes. Dornier Do 335A-0, (Wk. Nr. 240121) or (Wk. Nr. 240161), (to be confirmed), and Dornier Do 335A-12, (Wk. Nr. 240112), captured by American forces at Oberpfaffenhoffen, were transferred to the RAF.



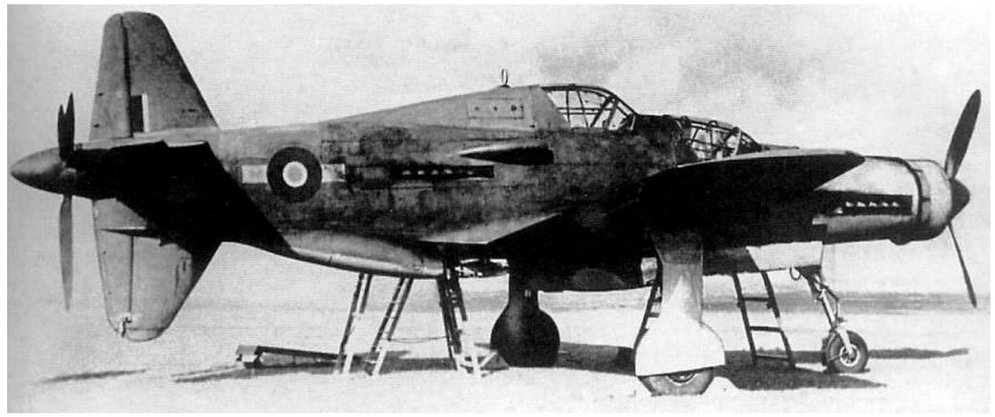
Dornier Do 335A-0, reported as (Wk. Nr. 240121) and (Wk. Nr. 240161), (unconfirmed), captured at Oberpfaffenhoffen, Germany by US forces. This single seat version was taken over by the RAF. It is shown here being examined by American soldiers. Designated RAF AM225, this aircraft was test flown until it waswritten off after a landing accident in Merville, France on 13 December 1945. (USAAF Photo)

Dornier Do 335A-1, reported as (Wk. Nr. 240121), and (Wk. Nr. 240161), (unconfirmed), RAF AM225, was a single-seat version of the Pfeil, which had been surrendered at the Dornier Oberpfaffenhofen factory and flown to Neubiberg under US control. It was an unpainted aircraft, which had not been delivered to the Luftwaffe. It was handed over to the British authorities on 7 September and flown from Neuberg to Reims where it became unserviceable. After repairs, it was test flown at Reims on 9 and 12 December, and then flown to Marville, France on 13 December where it made a forced landing with the nose wheel retracted, and was later scrapped. The only Do 335 parts sent to the UK included a single-seat fuselage, which was also scrapped at Farnborough.





Dornier Do335A-12, (Wk. Nr. 240112) captured by American forces at Oberpfaffenhofen, Germany. (Wk. Nr. 240112) was traded to the RAF where it became AM223. (USAAF Photos)



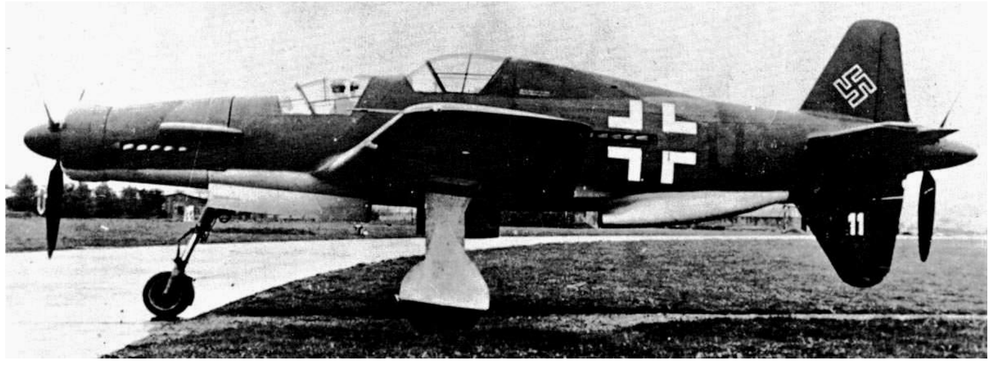




Dornier Do 335A-12 Pfeil, (Wk. Nr. 240112) at Farnborough, England, summer 1945. This aircraft crashed on 18 Jan 1946. (RAF Photos)

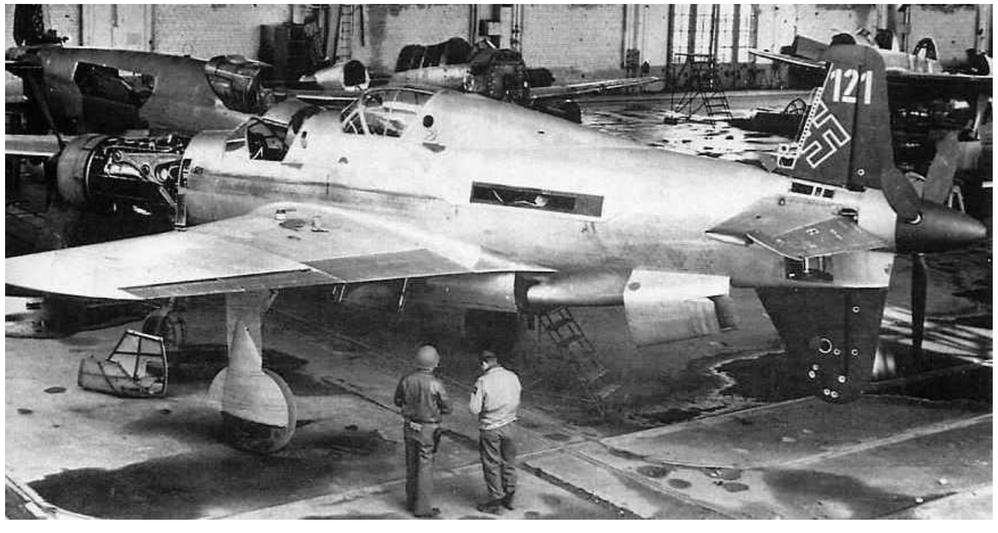
The Do 335A-12 Pfeil, (Wk. Nr. 240112), was captured by US forces at Oberpfaffenhofen, Germany, in May 1945. RCAF Squadron Leader Joe McCarthy had traded 15 Focke-Wulf Fw 190 single engine fighters to the USAAF for this aircraft (No. 112). This aircraft had its iron cross markings removed and USAAF star and bar markings had been painted on it. Joe put the RAF roundels on the aircraft over the star, but one can still see the bar under the roundel in this photo taken at the Royal Aircraft Establishment at Farnborough in England. Designated RAF AM223, it was test flown at war's end by RCAF S/L Joe McCarthy with the Royal Aircraft Establishment's Foreign Aircraft Flight at Farnborough, UK. This aircraft came to a

tragic end when, during a familiarization flight on 18 January 1946 the rear engine caught fire and the elevator controls burnt through. The aircraft plunged vertically into a school at Cove, Hampshire, killing RAF Group Captain Alan F. Hards.





Dornier Do 335A-11. (Luftwaffe Photos)



Dornier Do 335A-12, 121 in the factory, unfinished, one of 11 aircraft built at Oberpfaffenhofen, plus 9 aircraft partially assembled, November – April 1945) and captured by American forces at Oberpfaffenhofen, Germany, May 1945. 20 Do 335A-1 aircraft included (Wk. Nrs. 240113, 240161-240170), intact, and (Wk. Nrs. 240301-240309), partially assembled. Four partially assembled Do335A-4 (of 10 aircraft scheduled for January – February 1945) were also captured at Oberpfaffenhofen, (Wk. Nrs. 240310-240313). One Do 335A-10, (Wk. Nr. 240111), which had flown in late Nov 1944 was captured. (USAAF Photo)



Dornier Do 335A, 107, overhead view of a factory fresh Pfeil on the tarmac. (Luftwaffe Photo)

The A-1 version had a service ceiling of 37,400' and the A-6 version had a service ceiling of 33,400'. The Do 335A-1 was armed with two 15-mm MG 151/15 machine guns above the nose and one 30-mm Mk 103 cannon firing through the propeller hub. The Do 335A-6 was armed with two 20-mm MG 151/20 machine guns above the nose and one 30-mm Mk 103 cannon firing through the propeller hub. The Do 335B-2 was armed with two 20-mm MG 151/20 machine guns above the nose, two 30-mm Mk 103 cannon mounted in the wings and one 30-mm Mk 103 cannon firing through the propeller hub. Avionics for the Do 335B-2 included a FuG 125a blind landing receiver and FuG 25a IFF.



Captured Dornier Do 335A Pfeil. An American test pilot familiarizes himself with the controls of a USAAF-marked Dornier Do 335A Pfeil at a captured Luftwaffe airfield, surrounded by the wreckage of other German aircraft. (USAAF Photo)



Dornier Do 335A, (Wk. Nr. 240161), USA FE-1012, later T2-1012. (USAAF Photo)

As far as is known, the Pfeil never entered into combat, although US pilots reported seeing the strange aircraft in the sky during sorties over Germany, and the Erprobungskommando was forced to send aircraft into a sky which could not be guaranteed as being free of hostile aircraft. In its single-seat version it was one of the fastest piston-engined fighters ever built, with a claimed top speed of around 475-mph (765 km/h). Despite this high performance, it was the much slower two-seat night-fighter version which would probably have proved the most effective if the war had continued. Equipped with

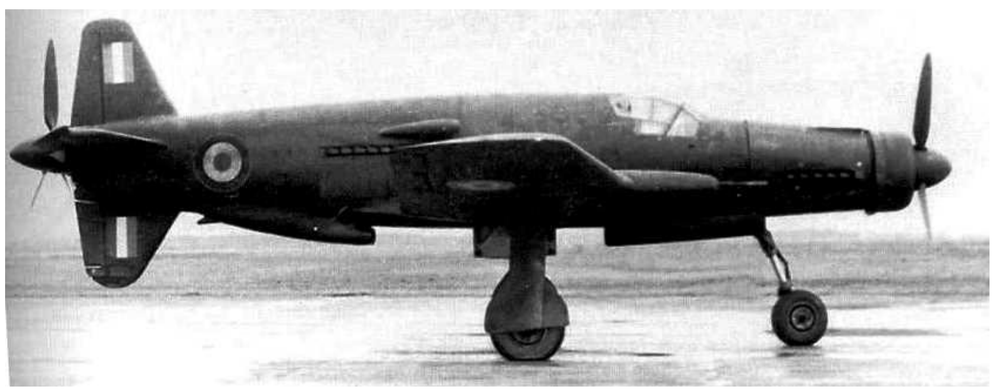
excellent radar and powerful weapons, and blessed with good visibility, combat persistence and performance, the night-fighter would have wreaked havoc against the RAF bomber streams.

Flying the Pfeil was an experience, thanks to its high performance and unusual configuration. While the performance provided an exhilarating ride for the pilot, the configuration prompted some doubts. His main concern was the ejection seat, the Do 335 being only the second production type to feature this (after the Saab J21). Before firing the seat, explosive bolts which held the upper vertical tail surface and rear propeller were fired to clear a way for the egressing pilot. Despite the ejection seat, he had to jettison the canopy manually. As another safety feature, the lower vertical tail surface was jettisonable in case a wheels-up landing was attempted. The upper tailfin and the rear propeller were equipped with explosive bolts to separate them from the fuselage to avoid impacting the pilot in the case of ejection.

When the US Army overran the Oberpfaffenhofen factory in late April 1945, only eleven Do 335A-1 single seat fighter-bombers and two Do 335A-12 conversion trainers had been completed. In his book *The Big Show*, French ace Pierre Clostermann claims the first Allied combat encounter with a *Pfeil* in April 1945. Leading a flight of four Hawker Tempests from No. 3 Sqn, RAF, over northern Germany, he intercepted by chance a lone Do 335 flying at maximum speed at treetop level. Detecting the British aircraft, the Luftwaffe pilot reversed course to evade. In spite of the Tempest's considerable speed (equal to a North American P-51D Mustang's), the RAF fighters were not able to catch up or even get into firing position.

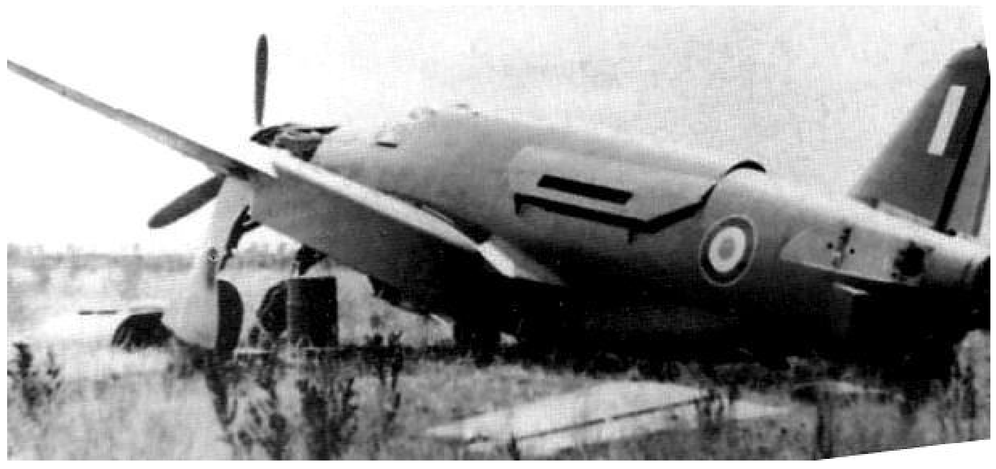


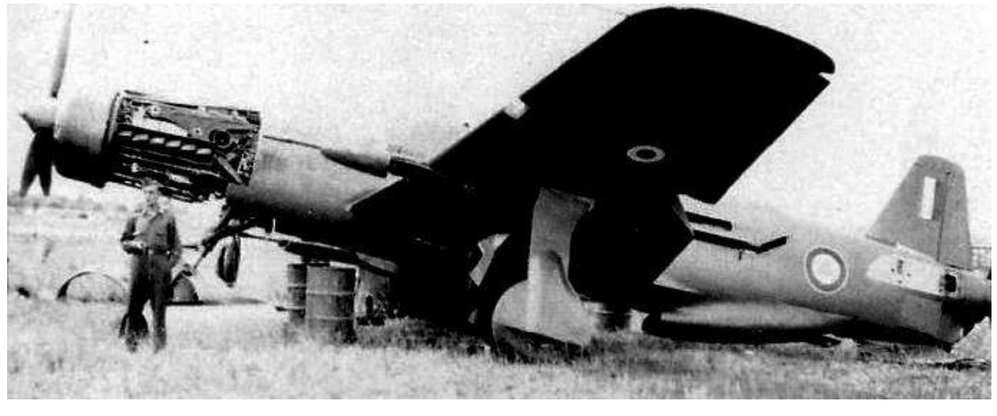






Dornier Do 335B-2 prototype, (Wk. Nr. 230018), ex-RP+UB, (14/18), armed with an additional pair of Rheinmetall-Borsig *Maschinenkanone* MK103 30-mm autocannon, transferred to France and painted in Armée de l'Air markings. (Armée de l'Air Photos)







Dornier Do 335V-17, B6 prototype, (Wk. Nr. 230016), coded RP+UE, No. 2, was transferred to France in the fall of 1945 and painted in French Armée de l'Air markings. It was damaged in a landing accident and written off. (Armée de l'Air Photos)





Dornier Do 335A *Pfeil* being loaded on HMS *Reaper* for shipment to the USA. (USN Photos)



Dornier Do 335A-0 *Pfeil* (Arrow) (Wk. Nr. 240102), coded VG+PH, tail number 102, at Freeman Field, Indiana post war. A second Do 335A (Wk. Nr. 240161), USA FE-1012 was probably scrapped at Freeman Field in 1946. (USAAF Photo)







Dornier Do 335A-0, (Wk. Nr. 240102), coded VG+PH at NAS Norfolk. This aircraft went to the USN Tactical Test Division at NAS Patuxent River, Maryland where it was allocated USN (BuNo. 121447) and examined from Dec 1945 to 31 Mar 1947, then stored at NAS Norfolk until 1961. It went to the Smithsonian, and was eventually sent to Germany on 10 Oct 1974 to the original makers for refurbishment. It was displayed in Deutsches Museum, Munich for a few years and then returned to the Smithsonian. It is now on display in the Steven F. Udvar-Hazy Centre, Chantilly, Virginia. (USN Photos)



Dornier Do 335A-02, (Wk. Nr. 240102), VG+PH, USN (BuNo. 121447), on display in the National Air and Space Museum Steven F. Udvar-Hazy Center, Washington-Dulles International Airport, Chantilly, Virginia. (Ishaan Dalal Photo)



Dornier Do 335A-02 Pfeil, (Wk. Nr. 240102), VG+PH, USN (BuNo. 121447), on display in the Steven F. Udvar-Hazy Centre, Chantilly, Virginia. (Guinog Photo)

The Do 335A-1 is on display in the National Air and Space Museum Steven F. Udvar-Hazy Center, Washington-Dulles International Airport, Chantilly, Virginia, was the second Do 335A-0, designated A-02, with construction number (Werk-Nummer 240102) and factory registration VG+PH. It was built at Dornier's Rechlin-Oberpfaffenhofen, Germany, plant on 16 April 1945. It was captured by Allied forces at the plant on 22 April 1945.

After checkout, it was flown from a grass runway at Oberweisenfeld, near Munich, to Cherbourg, France. During this flight, the Do 335 easily out-climbed and outdistanced two escorting North American P-51D Mustangs, beating them to Cherbourg by 45 minutes. Under the US Army Air Force's "Project Sea Horse," two Do 335s were shipped to the United States aboard the Royal Navy ship HMS *Reaper* together with other captured Luftwaffe aircraft, for detailed evaluation. This aircraft was assigned to the U.S. Navy, which tested it at the Test and Evaluation Center, Patuxent River Naval Air Station, Maryland. The other aircraft, Dornier Do 335A, (Wk. Nr. 240161), with registration FE-1012 (later T2-1012), went to the USAAF at Freeman Field, Indiana, where it was tested in early 1946. Its subsequent fate is unknown, and VG+PH is the only Do 335 known to exist.

Following Navy flight tests in 1945-48, the aircraft was donated to the Smithsonian's National Air Museum in 1961 but was stored at NAS Norfolk until 1974. It was then returned to Oberpfaffenhofen, Germany, where the Dornier Company restored it to original condition in 1975. The return trip to Germany required an exemption under U.S. laws concerning the export of munitions. The Dornier craftsmen doing the restoration, many of whom had worked on the original aircraft, were astonished to find that the explosive charges fitted to blow off the tail fin and rear propeller in an emergency were still in the aircraft and active, 30 years after their original installation! The Do 335 was put on static display at the 1-9 May 1976, Hannover Air show, and then loaned to the Deutsches Museum in Munich, where it was on prominent display until returned to Silver Hill, Maryland, in 1986.

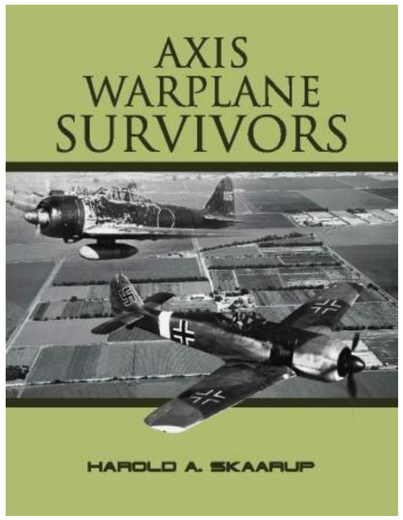


Dornier Do 335A-02 Pfeil, (Wk. Nr. 240102), VG+PH, USN (BuNo. 121447), as restored by the Deutsches Museum. (Dornier Photo)

Dornier Do 435, (project).

Dornier Do 635, (project).

German Warplane Survivors of the Second World War from Fieseler to Focke-Wulf may be viewed on the next page on this website.



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