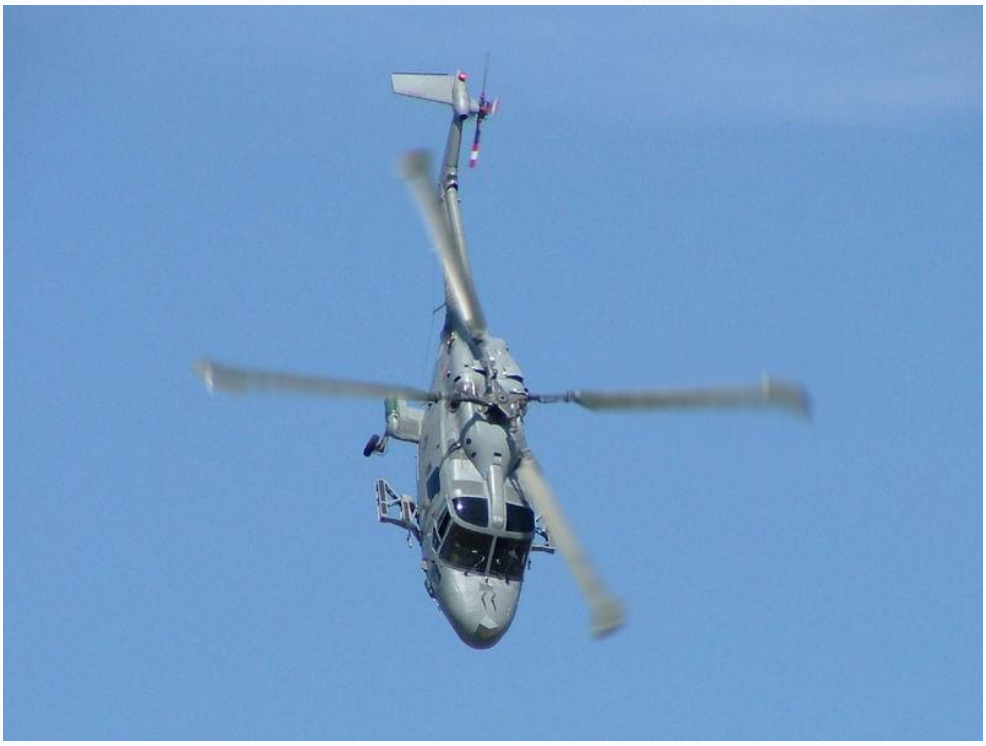
THE FASTEST HELICOPTER

(A MODIFIED WESTLAND LYNX)

AgustaWestland Lynx



Lynx HAS3 of the Black Cats (Royal Navy) display team

Manufacturer Westland/AgustaWestland

The **Westland Lynx** is a helicopter designed by Westland and built at Westland's factory in Yeovil, first flying on 21 March 1971 as the **Westland WG.13**. Originally intended as a utility craft for both civil and naval usage, military interest led to the development of the **Army and Navy Lynx**, which went into operational usage in 1977 and was later adopted by the armed forces of over a dozen nations. The helicopter is now produced and marketed by AgustaWestland.

Several aircraft were built under licence by French company Aerospatiale for French usage.

When piloted by Roy Moxam in 1972, it broke the world record over 15 and 25 km by flying at 321.74 km/h. It also set a new 100 km closed circuit record shortly afterwards, flying at 318.504 km/h. In 1986, a specially modified Westland Lynx piloted by John Egginton set an absolute speed record for helicopters over a 15 and 25 km course by reaching 400.87 km/h (249.09 mp/h). The Lynx is one of the most agile helicopters in the world, capable of performing backflips, among other things.

The British Army ordered 100 Lynx AH (**A**ttack **H**elicopter) Mk.1 for various roles, including tactical transport, armed escort, anti-tank warfare (with eight TOW missiles), reconnaissance and evacuation. The Army has fitted a Marconi Elliot AFCS system onto the Lynx for automatic stabilisation on three axis.

Service history

In British service it equips the Army Air Corps (AAC) and the Fleet Air Arm (FAA). For the AAC the Lynx AH.7 and AH.9 operate as attack helicopters. The Lynx AH.7 is service with the FAA where it operates as an attack/utility helicopter in support of the Royal Marines, and the Lynx HMA.8 as anti-submarine warfare helicopter equipped with the Sea Skua anti-ship missile for Royal Navy warships.

The Lynx's most prominent combat role was operating the Sea Skua to devastating effect against the Iraqi Navy during the 1991 Gulf War. The Lynx also saw service with British Army forces during that conflict. It had already made its first combat operations in British service during the Falklands War in the 80s. None were shot down, but three were lost aboard vessels hit by Argentine bombs or Exocets, one on the MV *Atlantic Conveyor* and one each on board HMS *Coventry* and HMS *Ardent*.

It was used during Operation Barras to rescue 11 British soldiers in Sierra Leone on 10 September 2000.

The most recent wartime mission for the Lynx was during the invasion of Iraq in 2003. It has also seen extensive service during peacekeeping operations and exercises, and it is standard equipment for most Royal Navy surface combatants when they deploy.

A British Lynx from No. 847 Naval Air Squadron was shot down over Basra, Iraq on May 6, 2006. The helicopter is believed to have been downed by either a missile or more likely, a Rocket Propelled Grenade (RPG). The Lynx crashed into a house and burst into flames, killing all five on board, including the Commanding Officer of 847 NAS. A riot followed with locals celebrating the downing of the helicopter and surrounding the crash site as British troops rushed to the scene. This was the first British helicopter and only the second British aircraft downed (the first was an RAF Hercules) due to enemy fire in the war.

Despite being well liked by the services the Lynx does not have a good safety record. The aircraft has been grounded on a number of occasions. In 2000 fatigue problems with the rotor head led to a Dutch aircraft crash and subsequent grounding. In early 2004 three Lynx crashed in a matter of weeks and again some aircraft were grounded. One of the reasons for the Future Lynx programme is to cure some of the known problems with the airframe and rotor systems.

Future Lynx

On 22 June 2006 the UK Ministry of Defence awarded Westland a £1 billion contract for 70 *Future Lynx* helicopters under a strategic partnering agreement with AgustaWestland[1]. The programme will provide the British Army and Royal Navy with 40 and 30 aircraft respectively, with an option for a further 10, split equally between Army and Navy.

Future Lynx is described as a new aircraft that builds on the dynamic and vehicle systems of the existing design, incorporating advanced technology and providing increased capability. The fatigue problems with the exisiting airframe and rotor system are to be corrected. Future Lynx will utilise some systems developed for the Super Lynx 300 and will feature a redesigned nose and rear fuselage to give greater space and easier access to avionic units. Future Lynx will be powered by two LHTEC CTS800 engines, offering increased power and endurance over existing Lynx powerplants, while retaining economy.

The first Future Lynx is programmed to make its maiden flight in 2009, with initial deliveries in 2011. The Army variant will enter operational service in 2014, with the RN variant following in 2015.

Versions

A *Lynx* of the Royal Malaysian Navy

- Westland WG.13: prototype that first flew on 21 March 1971.
- Lynx AH.1: Initial production version for the Army Air Corps, with over 100 examples built. Used for a variety of tasks, including tactical transport, armed escort, anti-tank warfare (equipped with eight TOW missiles), reconnaissance and casualty evacuation.
- Lynx AH.1GT: Interim conversion of the AH.Mk 1 for the British Army.
- Lynx HAS.2: Initial production version for the Royal Navy and the French *Aeronavale*. When it is used in the anti-submarine role, it is equipped with two torpedoes or depth charges and a dipping sonar. For anti-surface warfare, it is equipped with either four Sea Skua missiles (Royal Navy) or four AS.12 missiles (*Aeronavale*).
    - Lynx HAS.2(FN): French version of the HAS.Mk 2 for the *Aeronavale*.
- Lynx HAS.3
    - HAS.3(S): Improved version of the HAS.Mk 3 for the Royal Navy fitted with secure radio systems.
    - HAS.3(GM(S)): Nineteen modified helicopters for the Royal Navy, for service in the Persian Gulf (GM denotes **G**ulf **M**odification).
    - HAS.3(ICE(S)) : Two helicopters for the Royal Navy for use in the Arctic.
    - HT.3: Proposed training version for the RAF, not built.
- Lynx HAS.4(FN): Upgraded version for the *Aeronavale*.
- Lynx AH.5: Experimental version for the British Army. Only 4 were ever built.
- Lynx AH.6: Proposed version for the Royal Marines, not built.
- Lynx AH.7: Attack version for the Army Air Corps and Royal Marines.
- Lynx HMA.8 (*"Super Lynx"*): Upgraded maritime attack version.
    - HMA.8DSP: **D**igital **S**ignal **P**rocessor.
    - HMA.8DAS: **D**efensive **A**ids **S**ubsystem
- Lynx AH.9 (*"Battlefield Lynx"*): British Army version of the Super Lynx (AH.7 with wheeled undercarriage).
- Lynx Mk.21: Export version of the HAS.2 for the Brazilian Navy. Brazilian navy designation '*SAH-11"*.
- Super Lynx Mk.21A: Export version of the Super Lynx for the Brazilian navy.
- Lynx Mk.22: Unbuilt export version for the Egyptian navy.
- Lynx Mk.23: Export version of the HAS.2 for the Argentine navy. Later sold to Brazil and Denmark.
- Lynx Mk.24: Unbuilt export version for the Iraqi army.
- Lynx Mk.25: Export version of the HAS.2 for the Royal Netherlands Navy, also designated *"UH-14A"* in Dutch service.
- Lynx Mk.26: Unbuilt export version for the Iraqi army.

- Lynx Mk.27: Export version for the Royal Netherlands Navy, also designated *"SH-14B"* in Dutch service.
- Lynx Mk.28: Export version of the AH.Mk 1 for the Qatar Police.
- Lynx Mk.64: Export version of the Super Lynx for the South African Air Force.
- Lynx Mk.80: Export version of the HAS.Mk 2 for the Royal Danish Navy.
- Lynx Mk.81: Export version for the Royal Netherlands Navy, designated *"SH-14C"* in Dutch service.
- SH-14D: Upgraded helicopters for the Royal Netherlands Navy.
- Lynx Mk.82: Unbuilt export version for the Egyptian army.
- Lynx Mk.83: Unbuilt export version for the Saudi Arabian army.
- Lynx Mk 84: Unbuilt export version for the Qatar army.
- Lynx Mk 85: Unbuilt export version for the United Arab Emirates army.
- Lynx Mk.86: Export version of the HAS Mk 2 for the Royal Norwegian Air Force.
- Lynx Mk.87: Embargoed export version of the Argentine navy.
- Lynx Mk.88: Export version for the German Navy.
- Super Lynx Mk.88A: Upgraded version of the Lynx Mk.88 for the German Navy.
- Lynx Mk.89: Export version for the Nigerian navy.
- Lynx Mk.90: Export version for the Royal Danish Navy.
- Super Lynx Mk.90B: Upgraded versions of the Lynx Mk.80 and Lynx Mk.90 for the Royal Danish Navy.
- Lynx Mk.95: Export version of the HAS.8 for the Portuguese Navy.
- Lynx Mk.99: Export version of the HAS.8 for the South Korean Navy.
- Super Lynx 300: Export version of the Super Lynx.
- Battlefield Lynx: Proposed export version.
- Battlefield 800: Proposed export version, the project was abandoned in 1992.
- Lynx ACH: Experimental version

Notes:

- AH: Attack Helicopter
- HAS: Helicopter, Anti-Submarine
- HMA: Helicopter, Maritime Attack
- (GM): Gulf Modification
- (S): Secure speech radio

Users

- Argentine Navy
- Brazilian Navy
- British Army
- British Royal Navy
- Royal Danish Navy
- French Navy
- German Navy
- South Korean Navy
- Royal Malaysian Navy
- Netherlands Royal Navy (Six search and rescue and 18 anti-submarine warfare models.)
- Nigerian Navy
- Norway (Six operated on behalf of the Coast Guard by 337 Skvadron of the The Air Force from the Nordkapp Class cutters.)
- Royal Air Force of Oman

- Portuguese Navy (Used on "*Vasco da Gama class frigates*".)
- South African Air Force (Four of the Super Lynx 300 version for use on the SAN's *Valour* class patrol corvettes.)
- Qatar State Police
- Pakistan Navy(Westland Lynx Anti-Ship/Anti-Submarine/Transport Helicopters)

Specifications (Super Lynx Series 100)

Data from Flight International World Aircraft and Systems Directory (3rd ed.)

General characteristics

- **Crew:** 2 or 3
- **Length:** 15.24 m (50 ft)
- **Rotor diameter:** 12.80 m (42 ft)
- **Height:** 3.67 m (12 ft 0.5 in)
- **Disc area:** 1,385.4 m (128.71 sq ft)
- **Empty weight:** 3,291 kg (7,255 lb)
- **Max takeoff weight:** 5,330 kg (11,750 lb)
- **Powerplant:** 2× Rolls-Royce Gem, 835 kW (1,120 shp) each

Performance

- **Cruise speed:** 254 km/h (158 mph)
- **Range:** 528 km (328 miles [standard tanks])

Armament

- Naval: 2 x torpedoes *or* 4x Sea Skua missiles *or* 2 x depth charges.
- Attack: 8 x TOW ATGM
- General: GPMGs

External links

- helis.com Section on the Westland Lynx
- Fédération Aéronautique Internationale (FAI) rotorcraft world records page
- A video from december 1988 showing the lynx being put through some extreme manoeuvres trials.

Gallery

A *Lynx* helicopter taking off from the *Ouragan*

Replacement of a turbine on one of the two *Lynx* helicopters of the *Motte-Picquet*

A *Lynx* helicopter armed with a Mk46 torpedo

A *Lynx* helicopter of the 31F wing

A *Lynx* helicopter of the French Navy flying over Musha and Mascali islands (air wing of the *Motte-Picquet* frigate)

A *Lynx* Mk95 of the Portuguese Navy

Lynx supporting an antarctic research base

300px|Lynx of the French Navy 34F wing

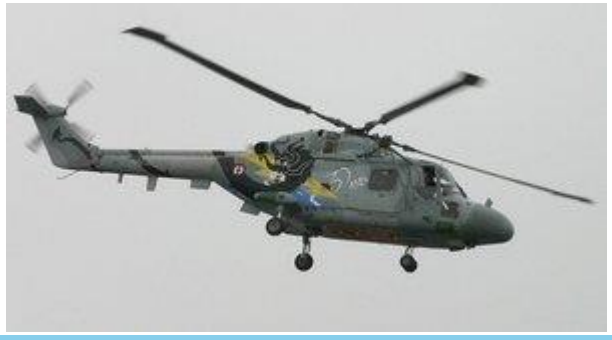
Related content

Comparable aircraft

- SH-60 Sea Hawk
- SH-2 Sea Sprite

Designation sequence

Westland Dragonfly - Westland Whirlwind - Westland Wessex- Westland Scout - Westland Wasp - **Westland Lynx**

Westland Lynx	
	
Description	
Role	Helicopter
Crew	2
Manufacturer	Westland
Nationality	British
Dimensions	
Length	13.33 m
Main rotor diameter	12.80 m
Height	3.67 m
Main rotor area	129 m²
Mass (empty)	3,291 kg
Mass (Maximum takeoff)	5,330 kg
Powerplant	2x Rolls-Royce Gem 42-1 turboshafts, 1,000 hp (746 kW) each
Maximum speed	256 km/h
Range	1,045 km
Rate of climb	606 m/min
Armament	Naval: 2 x torpedoes *or* 4x Sea Skua missiles *or* 2 x depth charges Attack: 8 x TOW ATGM Either: GPMGs