

# F-35 Lightning II

Stealth  
Agility  
Lethality

The F-35 is the largest defence programme in the world, led by the USA with eight international participating nations (UK, Italy, Netherlands, Australia, Canada, Denmark, Norway and Turkey) and a growing number of Foreign Military Sales (FMS) customers.

BAE Systems forms an integral part of the aerospace team, with Lockheed Martin and Northrop Grumman, that has collaboratively developed and now manufacture the three F-35 variants: A - Conventional Take Off and Landing (CTOL), B - Short Take Off and Vertical Landing (STOVL) and C - Carrier Variant (CV).

Before the end of this decade, the F35 Lightning II will provide the ultimate punch of the Royal Navy's Queen Elizabeth-class aircraft carriers.



## F-35B STOVL

### Performance

Top Speed:	1.6 Mach (1,200mph)
Combat radius:	>450nm (833km)
Max G rating:	7g
Max Thrust:	40,000lbs
Max weight:	60,000lbs

### Dimensions

Wingspan:	10.7m (35ft)
Length:	15.6m (51.2ft)
Height:	4.36m (14.3ft)
Wing area:	42.7m <sup>2</sup> (460ft <sup>2</sup> )

### Powerplant

Engine:	1 x F135-PW-600
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### BAE Systems

BAE Systems is responsible for around 15% of every F-35 produced, from the production of the rear fuselage through to essential systems such as Electronic Warfare.

The F-35 rear fuselage production line is located at Samlesbury, UK with other sub assemblies and equipment manufactured in the USA and Australia.

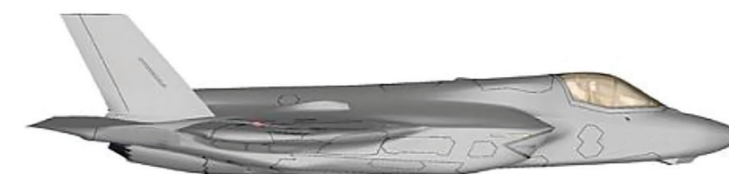
**BAE SYSTEMS**

INSPIRED WORK

Wingspan 10.7m (35ft)  
Height 4.36m (14.3ft)



Length Overall 15.6m (51.2ft)



Wing Area 42.7m<sup>2</sup> (460ft<sup>2</sup>)



# F-35 QEC Carrier Integration

BAE Systems plays a leading role integrating the F-35B with the Queen Elizabeth Class Aircraft Carriers for the UK.

Combining the biggest and most powerful surface warships ever made for the Royal Navy with the world's first supersonic STOVL (Short Take Off and Vertical Landing) aircraft, the UK will have a matchless capability when they enter service.

## F-35B Lightning II

Short take-off/vertical landing fighter-bomber

Length 15.6m (51.2ft)

Height 4.36m (14.3ft)

Wingspan 10.7m (35ft)

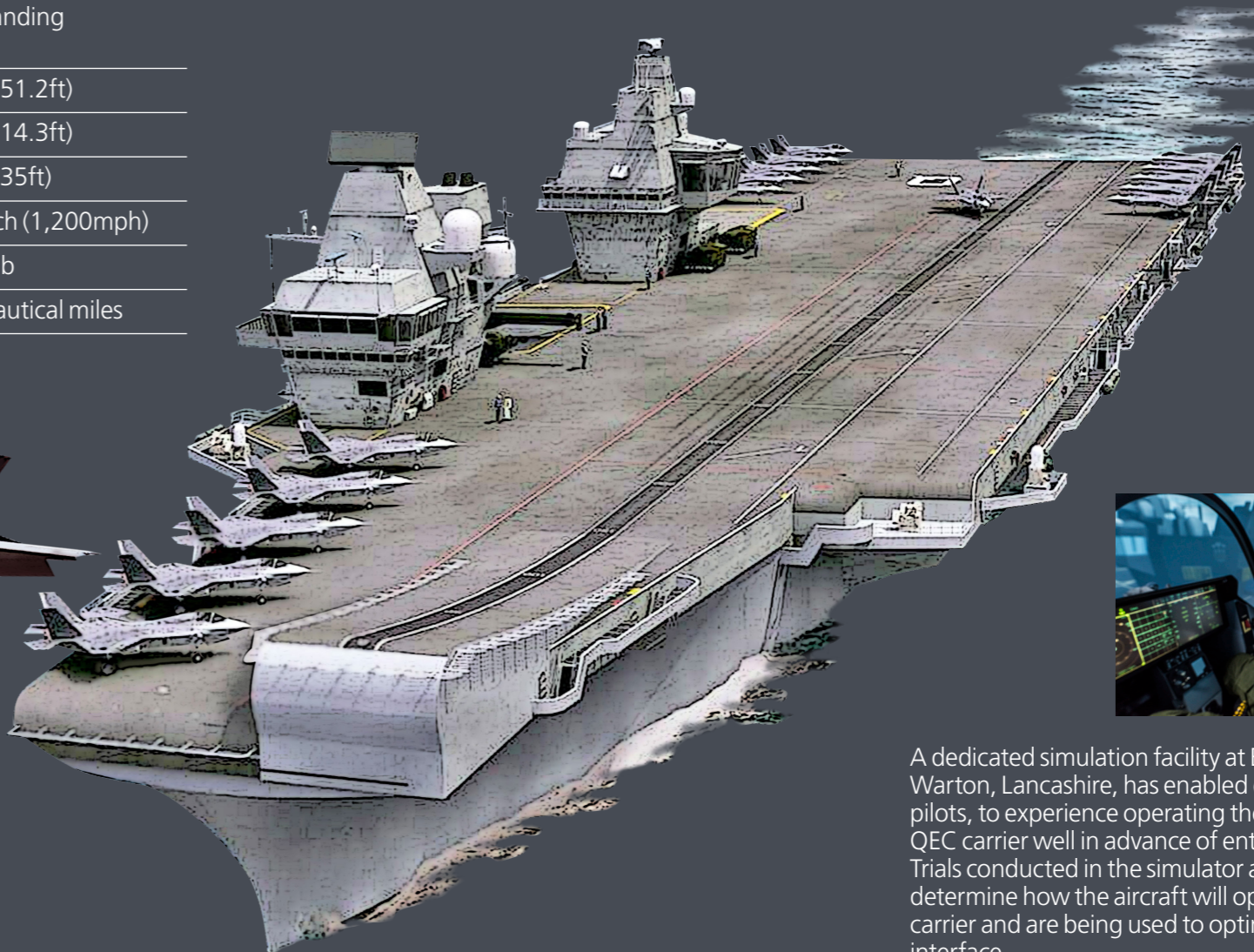
Speed 1.6 Mach (1,200mph)

Payload 15,000lb

Range >900 nautical miles

### F-35B Vertical Landing (VL)

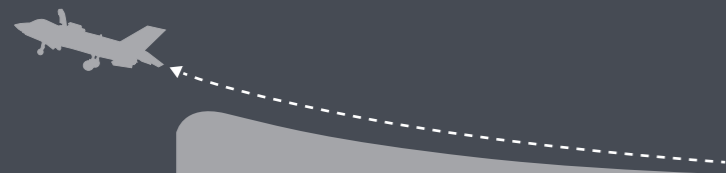
The advanced control system and flight deck layout minimise pilot workload when landing vertically on QEC's flight deck.



A dedicated simulation facility at BAE Systems Warton, Lancashire, has enabled engineers and pilots, to experience operating the F-35 from the QEC carrier well in advance of entry into service. Trials conducted in the simulator are helping determine how the aircraft will operate from the carrier and are being used to optimise the ship/air interface.

### F-35B Take off from the Ski Jump Ramp

The ski-jump has been designed to optimise launch performance. The technique has been practised and refined hundreds of times by pilots in the BAE Systems F-35/QEC Carrier Flight Simulator.



### F-35B Shipborne Rolling Vertical Landing (SRVL)

Landing with forward air speed allows the aircraft to bring back several thousand pounds of extra weight to the ship. A technique perfected in the simulator.

