

Boeing Defense, Space & Security
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F-15E Strike Eagle



Description and Purpose:

The F-15E Strike Eagle is the most capable multirole strike fighter available today. Its unparalleled range, speed, persistence and weapons load make it the backbone of the U.S. Air Force.

Customer(s):

During the past three decades, Boeing has produced more than 1,600 F-15 aircraft. The U.S. Air Force has no planned date to retire the F-15. Technology insertions and system upgrades are planned throughout that period to maintain its superiority. In 2008, the Air Force awarded Boeing a \$238 million contract to modernize the F-15E radar system. The Radar Modernization Program (RMP) incorporates an APG-82 Active Electronically Scanned Array (AESA) antenna with more supportable radar electronics. The APG-82 replaces the APG-70 radar currently integrated on the F-15E, improving radar reliability, maintenance and performance while reducing costs. The F-15E RMP entered flight test on Jan. 18, 2011, at Eglin Air Force Base, Fla. A successful Functional Check Flight (FCF) and completion of a Flight Test Readiness Review touched off an aggressive 14-month, 110-sortie flight test program. In September 2011 the U.S. Air Force granted the approval to begin low-rate initial production (LRIP) of the APG-82(V)1 radar system. In May of 2012, the U.S. Air Force granted the F-15E RMP approval to begin LRIP 2 of 10 APG-82(V)1 AESA radar systems.

The Air Force and Air National Guard (ANG) operate five F-15 models: the E and its A, B, C and D predecessors. Boeing is under contract to fully upgrade 18 ANG F-15C aircraft with the APG-63(V)3 AESA, and follow-on contracts are already in process.

The F-15E has two afterburning turbofan engines, each generating approximately 29,000 pounds of thrust. The aircraft can reach speeds exceeding twice the speed of sound. It can carry up to 23,000 pounds of payload, including air-to-ground weapons such as the Joint Direct Attack Munition (JDAM), Standoff Land Attack Missile Expanded Response (SLAM-ER), and air-to-air weapons such as the AIM-120 Advanced Medium Range Air-to-Air Missile (AMRAAM), AIM-9X Sidewinder and Small Diameter Bomb.

The Raytheon APG-70 radar system currently integrated on the F-15E provides high-resolution ground-mapping data that enables F-15 crews to identify targets at great distances and significantly increases situational awareness, lethality, and survivability.

The Lockheed Martin Low Altitude Navigation and Targeting Infrared for Night system allows aircrews to fly the Strike Eagle at high speed and low altitude at night and in bad weather while striking targets with pinpoint precision. The F-15 also employs Lockheed's Sniper Advanced Targeting Pod and Northrop's Litening targeting pod.

In addition to the United States, F-15 customers include Korea, Singapore, Japan, Saudi Arabia and Israel.

The government of Singapore awarded Boeing a contract in December 2005 to produce 12 F-15SG aircraft for its next-generation replacement fighter jet, and an option for eight additional aircraft at a future date. Production of the F-15SG began in March 2007. In October 2007, Singapore exercised its option for eight F-15SG aircraft and ordered an additional four F-15SGs. F-15SG1 was rolled out in a ceremony at Boeing St. Louis on Nov. 4, 2008. Delivery of those aircraft has been completed.

Boeing has delivered all 40 of the F-15K Slam Eagles ordered by the Republic of Korea (ROK) in October 2005. In April 2008, the ROK awarded Boeing a contract for an additional 21 F-15K aircraft. The final delivery of those aircraft took place in April 2012.

General Characteristics:

Length: 63.8 ft (19.45 m)

Height: 18.5 ft (5.65 m)

Wing Span: 42.8 ft (13.05 m)

Propulsion: Two P&W F100 or two GE F110 turbofan engines in 29,000 lb (13, 154 kg) thrust class with afterburning

Weight: 45,000 lb (20, 411 kg) class
81,000 lb (36, 700 kg) max gross takeoff

Speed: Mach 2.5 class

Armament:

F-15A/B/C/D Mix of air-to-air weaponry includes: 20mm cannon, AIM-120 (AMRAAM) missiles, AIM-9 (Sidewinder) missiles, AIM-7 (Sparrow) missiles

F-15E Air-to-ground ordnance includes precision guided munitions, and a variety of missiles and bombs. Air-to-air weaponry includes cannon, and eight medium- and short-range missiles.

Background:

The F-15 family of aircraft has a perfect air-combat record of more than 104 victories and zero defeats. F-15s downed four MiG-29 fighters during the Balkan conflict and 33 of the 35 fixed-wing aircraft Iraq lost in air combat during Operation Desert Storm. During the Balkan conflict, the F-15E was the only fighter able to attack ground targets

around the clock, in all weather conditions. F-15 aircraft are used by the Air Force against terrorist targets.

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