

US16E

Ejection Seat for F-35 Joint Strike Fighter



Key Facts



Over 1,500 US16E F-35 Ejection Seats currently in service



10 lives saved to date using the US16E Ejection Seat for F-35



The System Development & Demonstration (SDD) ejection seat that was selected by Lockheed Martin Aeronautics Company is a further development of the Mk16 range that has already been successful with the T-6 Texan II, Eurofighter Typhoon, NASA T-38N and USAF T-38 upgrade programmes and other numerous aircraft platforms around the world.

The US16E ejection seat provides an unprecedented balanced optimisation between key performance parameters such as safe terrain clearance limits, physiological loading limits, pilot boarding mass and anthropometric accommodation ranges to fully meet the F-35 Escape System requirements. The US16E is common to all F-35 aircraft variants.

Specification	US16E for F-35
Operating ceiling	50 000ft (15,250m)
Minimum height/speed	Zero/zero in near level attitude
Crew boarding mass range	103lb (46.7kg) to 245lb (111.1kg) (nude) light crew switch fitted mass boundary set at 150lbs (68kg)
Crew size range	JPATS multi-variate body size cases 1-8
Maximum Speed for ejection	600 KEAS
Parachute type	IGQ 6000 aeroconical 4-colour
Parachute deployment	Cartridge initiated
Drogue parachute	Yes
Drogue deployment	Cartridge initiated
Harness type	MG5 Integrated
Ejection seat operation type	Catapult and underseat rocket motor
Ejection gun	Twin catapult
Ejection initiation	Handle on seat bucket initiates gas operated seat firing system
Automatic back-up unit	Yes, mechanical system with barostatic time-release
Electronic Sequencer	Martin-Baker Sequencer (MBS) 23,500ft/18,000ft altitude switch, powered by thermal batteries
Timers	Time delays imposed by sequencer and ABU
Seat adjustment	Up/down actuator operated 28 Vdc with 7.4" (18.8cm) stroke Fore/aft manual tilt mechanism adjustment Tilt mechanism enables installation to aircraft with different bulkhead configurations
Arm restraints	Yes, active system
Leg restraints	Yes, passive system
Oxygen supply	Bottled back-up/emergency oxygen Connection to main On Board Oxygen Generation System (OBOGS)
Seat survival kit	Yes + automatic deployment and liferaft inflation
Aircrew services	Connection to main oxygen supply, mic/tel, anti-g, thermal cooling Interface to helmet
Canopy jettison	No
Canopy severance system	Yes
Interseat sequencing system	N/A
Auto eject system	Active on STOVL variant only

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Joint Strike Fighter



Martin-Baker Aircraft Company Limited,
Higher Denham,
Near Uxbridge,
UB9 5AJ,
UK

Telephone +44 (0) 1895 836658
information@martin-baker.co.uk

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▼ martin-baker.com



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