

F16F

Ejection Seat for Rafale



Key Facts



Over 500 F16F Ejection Seats currently in service



6 lives saved to date using the F16F Ejection Seat for Rafale



4th generation lightweight fighter aircraft, such as the Dassault Rafale, demand significant weight reduction for all their subsystems in order to achieve a lower aircraft total mass. The Mk16 ejection seat achieves its remarkably light weight by combining the twin catapult outer cylinder tubes as both propulsion system and as the seat's primary structure. The Mk16 ejection seat design optimises pilot field of view, improves comfort and pilot efficiency.

Reliability and maintainability have been key elements in the design, resulting in an escape system that has full component accessibility in the cockpit. Modular construction enables the seat to be safely removed or installed in minutes without removing the aircraft cockpit canopy. These and other design features will ensure that this new generation of ejection seat succeeds the Martin-Baker Mk10 as the world's most popular escape system.

Specification	F16F for Rafale
Operating ceiling	65,000ft (19,812m)
Minimum height/speed	Zero/zero in near level attitude
Crew boarding mass range	140lbs (63.5kg) to 233.7lbs (106.0kg)
Crew accomodation range	French Air Force specific aircrew size range 3 - 98%ile from AA153 – 84
Maximum Speed for ejection	625 KCAS
Parachute type	IGQ 5000 aeroconical 4 colour parachute
Parachute deployment	Cartridge initiated
Drogue deployment	Cartridge initiated
Automatic back-up unit	Yes, BTRU with manual override available
Sequencer	Mechanical mode selector, used in combination with barostatic time-release unit
Barostatic time-release unit	Yes + g-restrictor, cartridge initiated
Propulsion	Ejection gun and Under Seat Rocket Motor Lateral thrust rocket motor
Harness type	Gen 3 Integrated harness with ARZ GP91 QRB
System Iniation	Central handle on seat pan initiates gas operated seat firing system
Timers	Drogue Deployment Unit and Lock Release timers
Seat adjustment	28 VDC Seat raising actuator providing compound angle for travel
Arm restraints	Yes, active Type II arm restraint system
Leg restraints	Passive Leg Restraint System
Oxygen supply	Connection to On Board Oxygen Generating System (OBOGS) Emergency oxygen cylinder Nuclear, Biological and Chemical (NBC) ventilator
Personal Survival Pack (PSP)	Yes, automatic deployment and liferaft inflation via static line
Aircrew Services	Aircrew services package, interface for: <ul style="list-style-type: none">Breathing gasNBC ventilation supplyMic/telHelmet mounted display system interface
Canopy jettison	No
Canopy severance system	Yes, Dassault supplied
Interseat sequencing system	Yes, 2 mode Dassault supplied

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