

S10LS

Ejection Seat for SAAB Gripen



Key Facts



214 S10LS ejection seats currently in service



8 lives saved to date using the S10LS Ejection Seat for Gripen



The Mk10 Ejection Seat is designed in four main units, catapult, main beam structure, seat bucket and parachute assembly. This greatly simplifies and speeds maintenance or cockpit access. The Seat bucket can be rapidly removed to provide full access to the equipment in the cockpit without disarming or removing the main Seat structure or aircraft canopy. In a similar way the Seat can be rapidly installed or removed by assembly or disassembly of the main units in the aircraft. As the aircraft canopy is not removed, valuable maintenance time is saved.

The overall size footprint of the Mk10 Seat has been tailored to suit a large number of aircraft installations. This design envelope flexibility enables the seat to be perfectly matched to any existing or future cockpit space limitations without adversely affecting the primary design operation of the seat.

The S10LS was specifically designed for installation into the SAAB Gripen aircraft. This was the first SAAB aircraft to have a Martin-Baker Ejection Seat fitted as until this point SAAB had fitted their own Seats. The S10LS was the first Mk10 Seat to introduce a ballistic hot gas system to initiate drogue deployment, BTRU escapement and operate shackle release. This design was soon adopted for retrofit of other Mk10 Seats in-service. With the introduction of the S10LS Seat, the IGQ1000 parachute was replaced with the larger IGQ5000 parachute under a rigid lid. The IGQ5000 parachute offers a lower rate of descent over its predecessors, reducing the risk of parachute landing fall injuries.

Specification	S10LS for Gripen
Operating ceiling	55 000ft (16,764m)
Minimum height/speed	Zero/zero in near level attitude
Aircrew nude mass range	55.8 – 91.1 Kg
Aircrew boarding mass range	66.2 – 115. Kg
Aircrew size range	SAAB specific size range
Maximum speed for ejection	620 KCAS
Parachute type	IGQ 5000
Parachute deployment	Shackle release, drogue extraction
Drogue parachute	Duplex drogue
Drogue deployment	Cartridge initiated drogue gun
Harness type	Gen 2 Integrated harness
Ejection initiation	Handle on seat bucket initiates gas operated seat firing system
Propulsion	Catapult and Under Seat Rocket Motor (USRM)
Ejection gun/catapult	Single tube ejection gun / catapult
Automatic back-up unit	Yes, mechanical system with barostatic time-release
Seat adjustment	28VDC 5" travel up/down seat raising actuator
Arm restraints	Yes, active Type 1 arm restraint system
Leg restraints	Yes, active aircrew mounted double garters
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 via static line
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	Yes, twin seat aircraft
Auto eject system	No

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Gripen



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