

AEROFINA S.A.



SC HV-0 - EJECTION SEAT

DESTINATION AND UTILIZATION

Destination

The SC.HV-0 ejection seat is designed as an escape system for fighter IAR-93, J22 ORAO and IAR-99, provided that all mounting conditions required by its construction are observed.

Can be installed in any other aircraft cockpit, replacing Martin-Baker MK-10 ejection seat, with minor modifications, to meet the requirements according to MIL-STD-18471G, such as: Soko Galeb, IA-63 Pampa, Tornado, Kfir, Miraje, Alpha Jet, Gripen, Hawk.

Utilization

The SC.HV-0 permits the emergency ejection in case of aircraft damage within the following speed and altitude limits:

V = 0 : 1100 Km/h;

H = 0 : 15,000 m.

Seat ergonomics is according with the request and conditions imposed by MIL-STD 1472D, 5 - 95% anthropometric data for European air force pilots.

The base ejection pilot – seat system is to be through the cockpit canopy, but on customer request, the aircraft can be equipped with a micro detonator cord to break out canopy at ejection.

The aircraft air - oxygen regulator RAO-00, Personal Equipment Connector (PEC) and Emergency Oxygen System are mounted on the seat.

A single safety pin fitted to the seat firing handle makes the seat fully safe for parking.

GENERAL TECHNICAL DATE

- Ejection height H = 0...15,000 m
- Aircraft speed at ejection (IAS) V = 0...1100 Km/h
- Altitude of automatic separation 5,000 m
- Maxim deceleration at seat - pilot separation 3.5 ± 0.5 g
- Maxim altitude at which separation take place irrespective of deceleration H = $1,800 \pm 200$ m
- Maxim force to extract ejection handle $10 \div 29$ daN
- The weight of pilot complete equipped which can use the seat 110 Kg.
- Maxim descend speed of pilot with parachute 6.5 m/sec.
- Weight of complete equipped seat (without ejection gun) 90.3 Kg.

To prevent injury to aircrew by the necessary high acceleration forces applied during ejection, the seat system propulsion provide a maxim acceleration 18 g and 220 g/sec rate of rise.

Charge of ejection cartridges and propellant of rocket motor have made a significant contribution to this.

SPECIAL CONDITIONS FOR MOUNTING AND OPERATION

Operating conditions

On customer request on dual operation, front and rear, the seat can incorporate a Command Ejection System, code ISC 1045, for the synchronizing system of the ejection.

Mounting data

Within the ejection seat package we deliver the following parts necessary to mount the seat on the aircraft:

- superior fitting bolt, washer I, stop nut M8x1.25;
- inferior fitting bolt, washer II, stop nut M12x1.5.
- connection body for Personal Equipment Connector (PEC) and air - oxygen regulator RAO-001.

MAINTENANCE CONDITIONS

The SC.HV-0 seat is specially designed to minimize and simplify maintenance. The seat will require maintenance only once every two years, and overhaul every 8 years.

TESTING & QUALIFICATION

All testing are performing accomplished to full MIL-STD-810F requirements.

RECOMMENDED LIFE

The cartridges have 2 years, and rocket motor 5 years installed life.

The parachute system has a 6 years installed life.

Total life of ejection seat is the same with life of aircraft on which it is integrated.

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