Martin-Baker

NACES NXG

EJECTION SEAT FOR **F/A-18E/F/G, UJTS** AND **USN NGAD**

The US14A Navy Aircrew Common Ejection Seat (NACES), originally developed in the mid 1980's, is being upgraded into the NACES Next Generation (NACES NXG) configuration for the F/A-18 and T-45 replacement aircraft – Undergraduate Jet Training System (UJTS). The NXG improvements will ensure the NACES Seat will meet the very latest physiological injury requirements long into the future for US Navy Next Generation Air Dominance (NGAD):

- The NACES NXG introduces the Neck Protection Device (NPD) and Head Support Panel (HSP) to enable safe ejection for aircrew equipped with Helmet Mounted Display (HMD);
- A Gen 5 Integrated harness with a central single hand quick release will eliminate the land dragging injury risk associated with man-mounted torso harness designs, while including automatic release in water (MWARS). The Integrated harness will also aid aircrew breathing by not restricting lung volume (increased functional vital capacity);
- Introduction of the larger diameter IGQ6000 main parachute that will enable a heavier suspended weight to be ejected while reducing the descent velocity to reduce the risk of parachute landing fall injuries;
- The addition of arm restraint and a reefed drogue deployed earlier in the sequence will together improve stability to reduce the risk of high-speed ejection injury;
- A passive leg restraint system replaces the active / garter system to reduce aircrew burden.

SPECIFICATIONS	NACES NXG F/A-18
Operating Ceiling	50 000ft (15,250m)
Minimum height/speed	Zero/zero in near level attitude
Aircrew accommodation range	CAESAR multi-variate body size cases 1-6
Aircrew nude mass range	103lbs (46.7kg) to 245lbs (111.1kg)
Aircrew boarding mass range	138lbs (62.6kg) to 290lbs (131.5kg)
Maximum speed for ejection	600 KEAS
Parachute type	IGQ Type 6000 aeroconical 4-colour parachute
Parachute deployment	Cartridge initiated, electronic sequencer controlled
Drogue parachute	Yes, reefed ribbon type
Drogue deployment	Cartridge initiated, electronic sequencer controlled
Neck Protection	Yes, Neck Protection Device (NPD) fitted
Harness type	Gen 5 Integrated harness with Head Support Panel (HSP)
Ejection Seat operation type	Catapult and Under Seat Rocket Motor (USRM)
Ejection gun / catapult	Single tube ejection gun / catapult
Ejection initiation	Handle on seat bucket initiates gas operated seat firing system
Automatic back-up	Yes, mechanical system with Barostatic Release Unit (BRU)
Electronic Sequencer	Martin-Baker Sequencer (MBS) powered by thermal batteries
Timers	Time delays imposed by sequencer and BRU
Seat adjustment	Up/down actuator operated 28 Vdc with 6.2" stroke Fore/aft backrest translating adjustment mechanism
Arm restraints	Yes, active Type II arm restraint system
Leg restraints	Yes, passive system
Oxygen supply	Enhanced Emergency Oxygen System (EEOS) connection to main On Board Oxygen Generation System (OBOGS)
Seat Survival Kit (SSK)	Yes with automatic deployment and liferaft inflation via static line
Aircrew services	Connection to main oxygen supply, mic/tel, anti-g and Interface to helmet
Canopy Jettison System (CJS)	Yes
Canopy Severance System (CSS)	Yes
Inter-seat Sequencing System (ISS)	Yes
Auto Eject System (AES)	No

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