

EMALS AND AAG

AIRCRAFT LAUNCH AND RECOVERY SYSTEMS



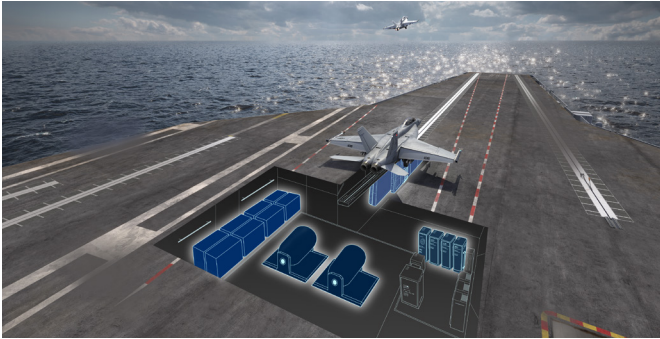
LAUNCHING A NEW ERA IN NAVAL AVIATION

The Electromagnetic Aircraft Launch System (EMALS) and Advanced Arresting Gear (AAG) provide greater efficiencies, performance, flexibility and operational capabilities than traditional launch and arrestment systems. Designed for integration into a variety of aircraft carrier platforms, EMALS and AAG offer the ability to launch and recover a wide range of aircraft weights to accommodate the current air wing and the air wing of the future.

Proven at sea, EMALS and AAG aboard USS Gerald R. Ford class carriers are providing the fleet with critical new capabilities to support decades of global operational readiness.



EMALS AND AAG



EMALS uses electromagnetic technology to launch the full spectrum of carrier-capable aircraft.

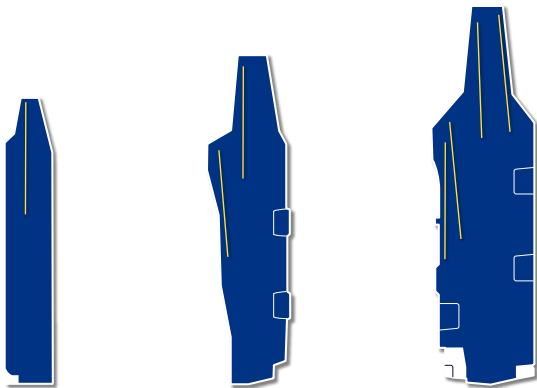


AAG is a turbo-electric system designed for controlled and reliable deceleration of aircraft.



Remotely Piloted Aircraft

F-35C Joint Strike Fighter



Electromagnetic launch systems can be designed for a variety of platforms and are capable of launching a wide range of aircraft weights.

TESTED AND PROVEN AT SEA

- Proven Performance in Operational Conditions
 - All weather, day, night operations
 - Minimal interval between catapult launches
- Increased Capability
 - Range of launch weights and higher speeds
- Lower Life Cycle Cost
 - 25% fewer personnel, less maintenance
- Higher Availability, Reliability and Safety
 - 100% safety record
 - Redundancy in design to ensure safe launch
- Better Compatibility for Electric Ship
 - Substantial decrease in system weight and footprint
 - Modern ship designs/equipment/weapons
 - Ready for the air wing of 2030
- Consistent Performance
 - 100% precise EMALS end speeds
 - Modern controls achieve smoother acceleration to more precise end speed, reducing fatigue on aircraft
- System Readiness and Responsiveness
 - Transitions from cold iron to operational status in minutes versus hours
- Improved Energy Efficiency
 - Order of magnitude efficiencies increase (from energy storage to launch energy released)
- Reduced Requirement for Ship Auxiliaries
 - No steam out of engineering spaces
 - Reduces water consumption by ~37,000 gal/day of operations
- Improved Shipboard Quality of Life
 - Quiet operations permits crew and pilot rest
- Ease of Operation and Shipboard Maintenance
 - Simple push button control
 - Maintenance involves circuit cards rather than mechanical steam systems