



# Adaptable Deck Launcher

Capable of launching multiple missile types from multiple platforms for multiple mission scenarios.

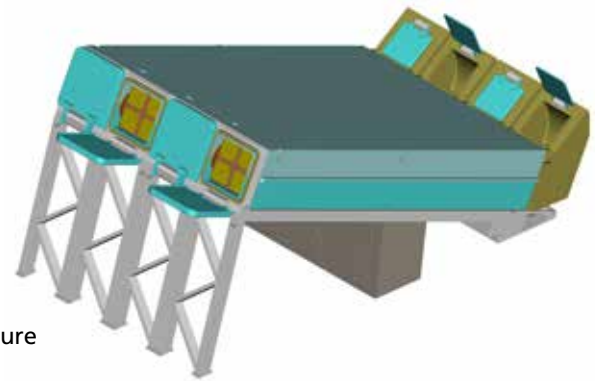
The Adaptable Deck Launcher, or ADL, meets the need for a fixed angle, deck-mounted launching system for near-term application onboard U.S. Navy and allied ships.

The ADL is available in two lengths, tactical length and strike length and is fully compatible with missile canisters developed for the Mk 41 Vertical Launching System (VLS). Launch control can be provided by the Mk41 VLS electronics suite or other launch control systems.

With a straightforward approach to deploying air defense, surface strike, and anti-submarine capability to non-Mk 41 VLS ships, ADL benefits from a modular design, allowing any number of launch cells to be configured as deck-mounted launchers for varying ship applications. It can be deployed with a protective

enclosure to minimize radar signature and maintenance, and to provide protection for the encanistered missiles. Reloadable, ADL will support numerous launches during its service life.

In Proof of Concept demonstrations, ADL successfully launched an ESSM from an ADL-enclosed Mk 25 Quad Pack Canister. Its success verified that ADL meets requirements for missile egress and gas management, and provides adequate launcher structural support. The demonstration also proved the Mk 41 VLS Launch Control System variant's applicability for ADL operation.



The ADL answers the call for Distributed Lethality and Distributed Maritime Operations for platforms big and small. Direct applications include LCS, FFG(X), and big deck amphibious ships and carriers.

ADL provides near-term "VLS-like" reliability with low cost operation, leveraging the existing Mk 41 VLS logistics system. The design meets shipboard marinization and survivability requirements, and can provide user-defined ballistic protection.

## Specifications

### Tactical Length Launcher

Length	284 inches
Width	152 inches
Height	121 inches
Weight	18,100 pounds

### Strike Length Launcher

Length	318 inches
Width	152 inches
Height	133 inches
Weight	20,250 pounds

### Power Required by Single Module Variant

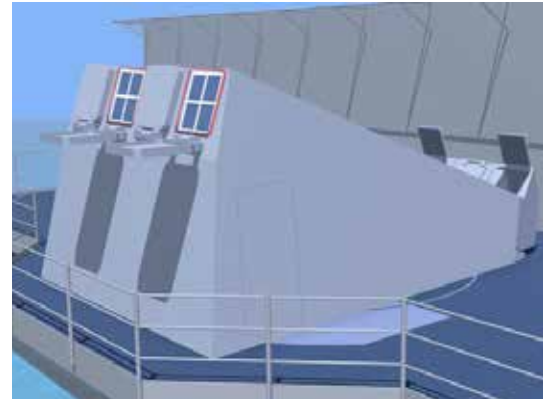
115 Vac 60 Hz 1 phase (Lightning)	2 kW
115 Vac 60 Hz 1 phase (Backup power for 440 Vac)	4 kW
115 Vac 60 Hz 1 phase (Launch control unit)	5 kW
440 Vac 400 Hz 3 phase	40 kW

### Ship Services Required

Cooling	10,000 Btu/hour
Heating	10,000 Btu/hour
Recirculation	560 ft <sup>3</sup> /min

### Launch Control System Weight

VLS Mk 41 based electronics	4,300 pounds
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## Missiles Compatible with ADL

MK41 VLS Missiles		Number of Missiles per Canister	Weight (pounds) Tactical Length		Weight (pounds) Strike Length	
Missile	Canister		Empty	Loaded	Empty	Loaded
SM-2 BLK II/III/IIIA/IIIB	MK 13	1	1500	3070	2120	3690
TOMAHAWK BLK III/IV <sup>1</sup>	MK 14	1	-	-	2150	6140
VLA MK45/MK54 TORPEDO	MK15	1	1760	3260	2380	3880
SM-2 BLK IV <sup>1</sup>	MK21 MOD 0	1	-	-	2950	6180
SM-3 BLK 1 <sup>1</sup>	MK21 MOD 2	1	-	-	2980	6340
SM-6 <sup>1</sup>	MK21 MOD 3	1	-	-	2980	6300
ESSM	MK25	4	3160	5820	3780	6440
SM-3 Blk IIA <sup>1</sup>	MK29	1	-	-	1700	6350
HARPOON <sup>2</sup>	N/A	1	1800	3320	2420	3940
LRASM <sup>1,2</sup>	N/A	1	-	-	2880	6230
NAVAL STRIKE MISSILE <sup>2</sup>	N/A	1	1700	2600	2320	3220

<sup>1</sup> Does not fit in tactical length launcher    <sup>2</sup> Not currently integrated into MK41 VLS

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