



L3HARRIS[®]
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RELEASE SYSTEMS
PRODUCT CATALOG

PNEUMATIC PARENT WEAPONS EJECTOR RACKS

Nomenclature	Platform(s)	Features	Ejection force source	Physical dimensions (LxHxW)	Weight	Weapon class	Aircraft mounting hook spacing to weapon
BRU-71	MQ-9 Reaper	<ul style="list-style-type: none"> • Settable pitch control for each piston • Seven feet-per-second (FPS) end-of-stroke velocity (500-pound store) • Piston stroke four inch • Pneumatic in-flight lock • Self-latching hooks • Single stage piston 	Pneumatic pressure 3,000 psi	24x5x2 in	19.6 lbs	Up to 1,000-lb class	Bolt-in pylon 14-inch spacing on hooks to weapons
BRU-67	F-35 Lightning II	<ul style="list-style-type: none"> • Semi-automatic swaybrace integral with eject piston providing store restraint • Arming units • Reversible in-flight lock • One centralized pitch control in pneumatic power module (PPM) with five pitch control settings • Status provided via controller area network (CAN) bus • 20 FPS end-of-stroke velocity (500-pound store) • Piston stroke 6.9 inch 	Pneumatically powered with 5,000-psi clean-air airborne compressor system	34x13x4 in	65 lbs	500/1,000 lbs	Internal carriage on short take-off and vertical landing aircraft (STOVL) with 14-inch suspension hooks
BRU-68	F-35 Lightning II	<ul style="list-style-type: none"> • Semi-automatic swaybrace integral with eject piston providing store restraint • Arming units • Reversible in-flight lock • One centralized pitch control in PPM with five pitch control settings • Status provided via CAN bus • 20 FPS end-of-stroke velocity (500-pound store) • Piston stroke 6.9 inch 	Pneumatically powered with 5,000-psi clean-air airborne compressor system	37x13x4 in	86 lbs	500/1,000/2,000 lbs	Internal carriage and external pylons with 14- or 30-inch suspension hooks
BRU-75	P-8A Poseidon	<ul style="list-style-type: none"> • End-of-stroke velocity 19.8 – 7.1 FPS (500-lb store) depending on pitch setting • Piston stroke 6.6 inch • Two stage piston 	Pneumatic pressure 5,000 psi	30x4x4 in	62 lbs	500/1,000 lbs	Bolt-in pylon 14-inch spacing on hooks to weapons
BRU-76	P-8A Poseidon	<ul style="list-style-type: none"> • End-of-stroke velocity 21.8 – 7.4 FPS (500-pound store) depending on pitch setting • End-of-stroke velocity 16.9 – 7.1 FPS (1,000-pound store) depending on pitch setting • Piston stroke 8.805 inch • Two stage piston 	Pneumatic pressure 5,000 psi	33x8x4 in	91 lbs	500/1,000/2,000 lbs	Bolt-in pylon 14- or 30-inch spacing on hooks to weapons



BRU-71



BRU-67 & BRU-68



BRU-75 & BRU-76

SMART MULTIPLE CARRIAGE RACKS

Nomenclature	Platform(s)	Features	Ejection force source	Physical dimensions (LxHxW)	Weight	Weapon class	Aircraft mounting hook spacing to weapon
BRU-78	Unmanned aerial vehicle (UAV) Light attack	<ul style="list-style-type: none"> Universal Armament Interface (UAI) Type 1 and 2 carriage system Can carry miniature munition store interface (MMSI) and MIL-STD-1760 stores Incorporates two BRU-71 ejector units 	Pneumatic pressure 3,000 psi	61x7x33 in	88 lbs	250 - 500 lbs	14-inch lugs to parent rack
BRU-57	F-16 Fighting Falcon	<ul style="list-style-type: none"> MIL-STD-1760 Class II signals <ul style="list-style-type: none"> Dual redundant MIL-STD-1553 communications Audio 115 VAC, 3-phase High bandwidth 1 (GPS) and 3 28 VDC 1 (10 amps per store available) 28 VDC 2 Address lines Connector-mated status Structure ground Release consent BRU-46 ejector signals implemented <ul style="list-style-type: none"> Dual cartridges Store sensing Arming units 115 VAC to 28 VDC power converter provides clean 28 VDC power to carried weapons Transparent to weapons 	Two BRU-46 ejector units Dual redundant pyrotechnic Hot gas filtration	70x9x31 in	264 lbs	500/1,000 lbs	Aircraft - 30 inch Weapon - 14 inch MIL-STD-1760 class II to aircraft and weapons
BRU-55	F-18 Super Hornet	<ul style="list-style-type: none"> MIL-STD-1760 Class II signals <ul style="list-style-type: none"> 115 VAC, 3-Phase High bandwidth 1 and 3 Low bandwidth 28 VDC 1 (10 amps per store available) 28 VDC 2 Address lines Release consent Interlock DAC4010 ejection function <ul style="list-style-type: none"> Cartridges Store sensing In-flight operable bomb release lock (IFOBRL) Nose and tail arming 	Two DAC4010 ejector units pyrotechnic Hot gas filtration	70x8x29 in	210 lbs	500/1,000 lbs	Aircraft - 30 inch Weapon - 14 inch MIL-STD-1760 class II to aircraft and weapons
BRU-70	AV-8B Harrier	<ul style="list-style-type: none"> Three store UAI Type 1 carriage system 	Three MAK77 ejector units pyrotechnic	68x17x17 in	135 lbs	500/1,000 lbs	Aircraft - 30 inch Weapon - 14 inch



BRU-78



BRU-57



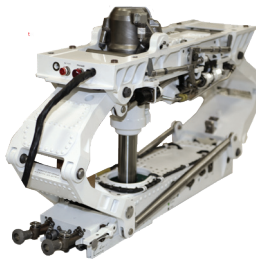
BRU-55



BRU-70

MISSILES AND SONOBUOY LAUNCHERS

Nomenclature	Platform(s)	Features	Ejection force source	Physical dimensions (LxHxW)	Weight	Weapon class	Aircraft mounting hook spacing to weapon
LAU-142 AMRAAM Vertical Eject Launcher (AVEL)	F-22 Raptor	<ul style="list-style-type: none"> • 27 FPS end-of-stroke velocity • Missile restraint throughout stroke • Optimized weight-to-performance design minimizes deflection • Hydraulic loading ground extend and retract time is three seconds • Aircraft hydraulic power converted to pneumatic energy for ejection 	Pneumatic using aircraft hydraulic power	40x9x18 in	115 lbs	AIM-120C Advanced Medium-Range Air-to-Air Missile (AMRAAM)	Internal carriage and ejection of AIM-120 AMRAAM
LAU-147	F-35 Lightning II	<ul style="list-style-type: none"> • Launcher hooks mate with forward and center hangers of missile • Swaybraces integral with ejector piston providing store restraint and motion departure control • Self-adjusting, self-centering and load-limiting swaybrace system • Two stage ejectors with an eight-inch stroke • Umbilical connector compatible with AIM-120C connector • Reversible in-flight lock • Status provided via CAN bus • Nose down pitch rate not to exceed 1 radian per second at end-of-stroke • 25 FPS end-of-stroke velocity • 37 Gs max acceleration and 12,000-pound maximum ejection force 	Pneumatic using 5,000-psi clean-air from airborne compressor system	43x7x4 in	63 lbs	AIM-120C AMRAAM	Internal carriage and ejection of AIM-120 AMRAAM
Sonobuoy Rotary Launch System (SRL)	P-8A Poseidon	<ul style="list-style-type: none"> • Holds up to 10 sonobuoys • Capable of launching a buoy every three seconds • Reloadable in flight • Can launch 40 buoys with a 5,000-psi charge • Ejects A-size sonobuoys from LAU-126 container • 32 – 46 FPS end-of-stroke velocity, depending on weight 	Pneumatic using 2,000 – 5,000-psi clean-air from airborne compressor system	33x60x33 in	270 lbs	A-size sonobuoys Potential for other sizes	Base mounted to aircraft
Sonobuoy Single Launch System (SSL)	P-8A Poseidon	<ul style="list-style-type: none"> • Holds and launches one sonobuoy • Reloadable in flight • Ejects A-size sonobuoys from LAU-126 container • End-of-stroke velocity from 32 – 46 FPS velocity, depending on weight 	Pneumatic using 2,000 – 5,000-psi clean-air from airborne compressor system	28x29x12 in	37 lbs	A-size sonobuoys Potential for other sizes	Base mounted to aircraft



LAU-142



LAU-147



SONOBUOY ROTARY LAUNCHER



SONOBUOY SINGLE LAUNCHER

PYROTECHNIC PARENT WEAPONS EJECTOR RACKS

Nomenclature	Platform(s)	Features	Ejection force source	Physical dimensions (LxHxW)	Weight	Weapon class	Aircraft mounting hook spacing to weapon
BRU-46	F-15E Strike Eagle F-22 Raptor	<ul style="list-style-type: none"> Semi-automatic sway bracing 20 FPS end-of-stroke velocity 	Dual redundant pyrotechnic Hot gas filtration	28x6x2 in	40 lbs	1,000 lbs	Bolt-in pylon 14-inch spacing on hooks to weapons
BRU-47	F-15E Strike Eagle F-22 Raptor	<ul style="list-style-type: none"> Semi-automatic sway bracing 14.4 FPS end-of-stroke velocity 	Dual redundant pyrotechnic Hot gas filtration	36x7x3 in	86 lbs	2,000 lbs	Bolt-in pylon 14- or 30-inch spacing on hooks to weapons
BRU-56 (modified)	B-1B Lancer	<ul style="list-style-type: none"> Modified BRU-56 currently under development 	Dual redundant pyrotechnic	49x12x12 in	105 lbs (estimated)	500/1,000/ 2,000 lbs	Bolt to rotary launcher 14- or 30-inch spacing on hooks to weapons

ELECTRIC CARRIAGE RELEASE SYSTEMS

Nomenclature	Platform(s)	Features	Ejection force source	Physical dimensions (LxHxW)	Weight	Weapon class	Aircraft mounting hook spacing to weapon
BRU-82	Light attack Rotary wing	<ul style="list-style-type: none"> Electric actuated weapons release rack that incorporates all current and approved safety features and user interface 	Gravity release	24x5x2 in	15 lbs	500/1,000 lbs	14-inch lugs to parent rack
BRU-81	Light attack Rotary wing	<ul style="list-style-type: none"> Electric actuated weapons release rack that incorporates all current and approved safety features and user interface 	Gravity release	33x8x4 in	65 lbs	500/1,000/ 2,000 lbs	14-inch lugs to parent rack

SONOBUOY LAUNCHERS (IN DEVELOPMENT)

Nomenclature	Platform(s)	Features	Ejection force source	Physical dimensions (LxHxW)	Weight	Weapon class	Aircraft mounting hook spacing to weapon
Modular Launch Tube (MLT)	UAV Light attack Rotary wing	<ul style="list-style-type: none"> Externally ground-loaded individual launch station Holds and launches one sonobuoy Ejects A-size sonobuoys from LAU-126 container Functional as stand-alone launcher or configurable in multiples for integration into system-level solution Features buoy sensor to ensure positive carriage and launch 	Pneumatically powered with 1,000 – 5,000 psi clean air	45-inch length by six inch diameter	10 lbs	A-size sonobuoys Potential for other sizes	Variable (external or internal mounting)
Sonobuoy Dispenser System (SDS)	UAV Light attack	<ul style="list-style-type: none"> Pylon-mounted, multi-station pneumatic sonobuoy launcher based around multiple MLTs arranged in an external pod Ejects A-size sonobuoys from LAU-126 containers Externally ground-loaded 	Pneumatically powered with 1,000 – 5,000 psi clean air	Variable depending on configuration (e.g. number of MLT stations)	Variable depending on configuration (e.g. number of MLT stations)	A-size sonobuoys Potential for other sizes	Mates to standard BRU with 14/30-inch hooks



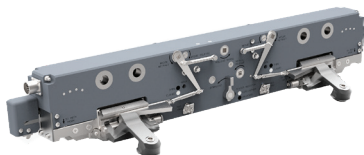
BRU-46



BRU-47



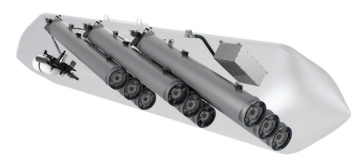
BRU-82



BRU-81



MODULAR LAUNCH TUBE



SONOBUOY DISPENSER SYSTEM

CARRIAGE RELEASE SYSTEMS – UK

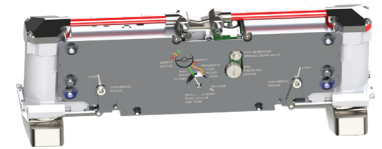
Nomenclature	Platform(s)	Features	Ejection force source	Physical dimensions (LxHxW)	Weight	Weapon class	Aircraft mounting hook spacing to weapon
Wasp Hornet	Special purpose aircraft (SPA) UAV	<ul style="list-style-type: none"> Hook closed sensor In-flight lock Store diameters three to twelve inches Self-latching hook Spring-loaded sway bracing provides positive separation Hornet has internal electrical umbilical for weapon comms Mating weapon mini hardback with lug and mission store interface (MSI) 	Electro-mechanical gravity release	Wasp 6x4.5x1.5 in Hornet 8.5x4.5x1.5 in	Wasp 1.7 lbs Hornet 2.1 lbs	50 lbs maximum	Single hook (100 lbs lug)
Gnat	SPA UAV	<ul style="list-style-type: none"> Self-latching hooks Stored energy actuator Soft ejection option In-flight lock Light and heavy duty versions 	Electro-mechanical gravity release Soft eject	15x6x5 in	Light duty (LD) 6.2 lbs Heavy duty (HD) 11.1 lbs	LD 150 lbs maximum HD 415 lbs maximum +/- 2G roll	14-inch centers
Scorpion	Multiple store carriers SPA UAV	<ul style="list-style-type: none"> Twin-stage telescopic pistons Semi-automatic crutching Settable pitch control for each piston In-flight lock High end of stroke velocity 	External-pneumatic (cold gas) eject	20x7x3.5 in	24 lbs	670 lbs maximum	14-inch centers
Pneumatic Missile Eject Launcher (PMEL)	Fast jet	<ul style="list-style-type: none"> Non-pyrotechnic missile eject launcher Carries and releases MeteorMRAAM Twin-stage telescopic pistons Automatic snubbing In-flight lock 	External-pneumatic (cold gas) eject	105x8x5 in	85 lbs	420 lbs	STANAG 3842
Modular Advanced Lightweight System (MALTS)-2 MALTS-4	SPA Fast jet	<ul style="list-style-type: none"> Non-pyrotechnic practice bomb carrier Carries two and four practice bombs Accepts all NATO practice stores Self-latching hook No first-line servicing Adapter enables laser guided training round (LGTR) carriage 	Electro-mechanical soft eject	Two station 55x6.5x10 in Four station 55x6.5x19 in	Two station 39 lbs Four station 71 lbs	Two station 25 lbs Four station 25 lbs	14-inch centers



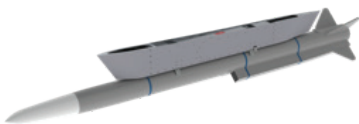
WASP / HORNET



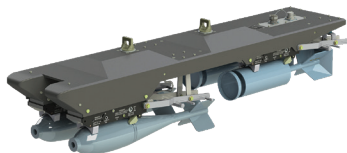
GNAT



SCORPION



PMEL



MALTS



SPEAR

CARRIAGE RELEASE SYSTEMS – UK (IN DEVELOPMENT)

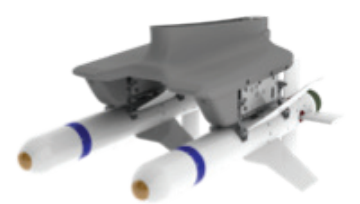
Nomenclature	Platform(s)	Features	Ejection force source	Physical dimensions (LxHxW)	Weight	Weapon class	Aircraft mounting hook spacing to weapon
Sabre	SPA UAV	<ul style="list-style-type: none"> Uses two Gnat HD release units (RU) Common strongback structure enables an optional center-line station (i.e. 1,245-pounds total weapon load-out) 	Electro-mechanical gravity release	Twin 10x43x23 in Triple 14x51x23 in	Twin - 40 lbs Triple - 53 lbs	415 lbs maximum	14-inch centers
2 x 500 lbs	Fast jet	<ul style="list-style-type: none"> Common weapon launcher Uses two Scorpion ERUs 	Internal-pneumatic (cold gas) eject	79x16x26 in	270 lbs	500 lbs	30-inch centers
2 x 50 lbs	SPA UAV	<ul style="list-style-type: none"> Uses two Hornet RUs 	Electro-mechanical gravity release	24x8x14 in	16 lbs	50 lbs maximum	14-inch centers
2 x 50 lbs	SPA UAV	<ul style="list-style-type: none"> Uses two Hornet RUs 	Electro-mechanical gravity release	60x8x10 in	34 lbs	50 lbs maximum	14-inch centers
2 x 100 lbs	SPA UAV	<ul style="list-style-type: none"> Uses two Gnat RUs Four-station concept available 	Electro-mechanical gravity release	60x8x10 in	45 lbs	100 lbs maximum	14-inch centers
3 x 50 lbs	SPA UAV	<ul style="list-style-type: none"> Uses three Hornet RUs Option to mount alternately on a Hellfire rail 	Electro-mechanical gravity release	79x8x10 in	56 lbs	50 lbs maximum	14-inch centers



SABRE



2 X 500



2 X 50



2 X 50



2 X 100



3 X 50

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Release Systems Product Catalog

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