ALM
ASSAULT LAUNCHER MAX

The ALM™ is ***the NEW Generation*** high performance line-throwing appliance specifically designed to deploy a line only, a grappling hook and climbing line, or a grappling hook and ascending ladder to an otherwise inaccessible point in both land-based and surface and subsurface maritime environments.

The **Aluminum** series is designed for rugged use in land-based application and may also be discharged when partially submerged in water. It is built to suit the missions of modern day Tactical & Special Forces units - for use in applications which may include severe exposure to marine environments, including submersion in seawater - such as sub-surface movements of divers, as well as for land-based and surface based maritime environments.

- Utilizing a patented* air-thrust technology, the ALM is non-pyrotechnic, reusable, and refillable.
- Launcher assembly housings are cast from 356-T6 Aluminum for best weight/strength ratio. Housings have a lifetime guarantee over service life of equipment.
- 4500 psi / 310 bar service pressure aluminum projectile.
- 3000 psi / 207 bar service pressure aluminum projectile.

ALM Kits are recommended basic configurations tailored for specific applications. Additional lines, projectiles, and accessories can be purchased separately. Custom Kit configurations are also available on request.

ALM Standard & HP Kits

DESCRIPTION & PART NUMBERS	
Kit 460 - ALM Climbing Line Grapnel Launcher	
1 - Part #540	ALM Launcher w/ Folding Stock
2 - Part #300-S	Streamline Projectile (w/ 2 spare covers) - 3000psi
1 - Part #801	5780lb test 7mm Black Climbing line (165ft/50m) w/ Compact Line Container
1 - Part #802	3200lb test 5.5mm Black Climbing line (328ft/100m) w/ Compact Line Container
1 - Part #750	Titanium Grappling Hook - Standard
1 - *Select*	Streamline Filler Hose (#911-S SCBA; #912-S SCUBA; #913-S SCBA-DIN)
1 - Part #906	Cordura Kit Carry Bag - Black
1 - Part #991	ALM Tool Kit
1 - Part #909	Large Pelican Storage/Transport Case
Kit 461 -ALM Method of Entry Grapnel Launcher	
1 - Part #540	ALM Launcher w/ Folding Stock
2 - Part #300-S	Streamline Projectile (w/ 2 spare covers) - 3000psi
1 - Part #801	5780lb test 7mm Black Climbing line (165ft/50m) w/ Compact Line Container
1 - Part #744	Tactical Ladder - 50ft/15m w/ Compact Line Container
1 - Part #750	Titanium Grappling Hook - Standard
1 - *Select*	Streamline Filler Hose (#911-S SCBA; #912-S SCUBA; #913-S SCBA-DIN)
1 - Part #906	Cordura Kit Carry Bag - Black
1 - Part #991	ALM Tool Kit
1 - Part #909	Large Pelican Storage/Transport Case
Kit 463 - ALM Combo Grapnel Launcher	
1 - Part #540	ALM Launcher w/ Folding Stock
2 - Part #300-S	Streamline Projectile (w/ 2 spare covers) - 3000psi
1 - Part #801	5780lb test 7mm Black Climbing line (165ft/50m) w/ Compact Line Container
1 - Part #802	3200lb test 5.5mm Black Climbing line (328ft/100m) w/ Compact Line Container
1 - Part #744	Tactical Ladder - 50ft/15m w/ Compact Line Container
1 - Part #750	Titanium Grappling Hook - Standard
1 - *Select*	Streamline Filler Hose (#911-S SCBA; #912-S SCUBA; #913-S SCBA-DIN)
1 - Part #906	Cordura Kit Carry Bag - Black
1 - Part #991	ALM Tool Kit
1 - Part #909	Large Pelican Storage/Transport Case
Kit 470 - ALM High Pressure Climbing Line Grapnel Launcher	
1 - Part #540	ALM Launcher w/ Folding Stock
2 - Part #310-S	High Pressure Projectile - 4,500psi
1 - Part #802	3200lb test 5.5mm Black Climbing line (328ft/100m) w/ Compact Line Container
1 - Part #815	8.4 mm Black Climbing Line (230ft/70m) w/ Large Line Container
1 - Part #750	Titanium Grappling Hook - Standard
1 - *Select*	Streamline Filler Hose (#911-S SCBA; #912-S SCUBA; #913-S SCBA-DIN)
1 - Part #906	Cordura Kit Carry Bag - Black
1 - Part #991	ALM Tool Kit
1 - Part #909	Large Pelican Storage/Transport Case
Kit 471 - ALM High Pressure Method of Entry Grapnel Launcher	
1 - Part #540	ALM Launcher w/ Folding Stock
2 - Part #310-S	High Pressure Projectile - 4,500psi
1 - Part #815	8.4 mm Black Climbing Line (230ft/70m) w/ Large Line Container
1 - Part #746	Tactical Ladder - 65ft/20m w/ Large Line Container
1 - Part #750	Titanium Grappling Hook - Standard
1 - *Select*	Streamline Filler Hose (#911-S SCBA; #912-S SCUBA; #913-S SCBA-DIN)
1 - Part #906	Cordura Kit Carry Bag - Black
1 - Part #991	ALM Tool Kit
1 - Part #909	Large Pelican Storage/Transport Case
Kit 473 - ALM High Pressure Combo Grapnel Launcher	
1 - Part #540	ALM Launcher w/ Folding Stock
2 - Part #310-S	High Pressure Projectile - 4,500psi
1 - Part #746	Tactical Ladder - 65ft/20m w/ Large Line Container
1 - Part #802	3200lb test 5.5mm Black Climbing line (328ft/100m) w/ Compact Line Container
1 - Part #815	8.4 mm Black Climbing Line (230ft/70m) w/ Large Line Container
1 - Part #750	Titanium Grappling Hook - Standard
1 - *Select*	Streamline Filler Hose (#911-S SCBA; #912-S SCUBA; #913-S SCBA-DIN)
1 - Part #906	Cordura Kit Carry Bag - Black
1 - Part #991	ALM Tool Kit
1 - Part #909	Large Pelican Storage/Transport Case
Kit 474 - ALM HP RGES SF40	
1 - Part #540	ALM Launcher w/ Folding Stock
2 - Part #310-S	High Pressure Projectile - 4,500psi
2 - Part #840	RGES SF40 Payloads (40ft/12m) with Large Line Container
1 - Part #712	CO2 Cylinders & Bobbins - 5 pk.
1 - *Select*	Streamline Filler Hose (#911-S SCBA; #912-S SCUBA; #913-S SCBA-DIN)
1 - Part #906	Cordura Kit Carry Bag - Black
1 - Part #991	ALM Tool Kit
1 - Part #909	Large Pelican Storage/Transport Case
Kit 475 - ALM HP Ascender Grapnel Launcher	
1 - Part #540	ALM Launcher w/ Folding Stock
2 - Part #310-S	High Pressure Projectile - 4,500psi
2 - Part #817	11 mm Black Climbing Line (165ft/50m) w/ Large Line Container
2 - Part #750	Titanium Grappling Hook - Standard
1 - *Select*	Streamline Filler Hose (#911-S SCBA; #912-S SCUBA; #913-S SCBA-DIN)
1 - Part #906	Cordura Kit Carry Bag - Black
1 - Part #991	ALM Tool Kit
1 - Part #909	Large Pelican Storage/Transport Case

MAXimum Distance

The ALM is capable of deploying a 3,200lb test strength line horizontally up to 330 feet / 100 meters. The ALM can deploy a 7.0mm climbing line with Climbing Grappling Hook vertically up to 130 feet / 40 meters. A 50ft / 15m Ascending Ladder and Climbing Grappling Hook can be fully deployed by the ALM.

MAXimum Safety

- The safety mechanism is "always on," re-setting automatically when a projectile is inserted.
- The projectile's "Push-Click" engagement allows easy reloading, even in the dark.
- A pressure relief burst disk prevents unsafe pressure build-up that could result from exposure to extreme heat.
- Each launcher is fitted with a luminous pressure gauge for close visibility at night.

MAXimum Performance

Multi-Shot Capacity. Our patented *nozzle-valve* permits any number of projectiles to be precharged and stored with the unit, allowing deployment of multiple projectiles in rapid succession.

MAXimum Ease of Use

The ALM Filler System is equipped at each end with a "quick connect" for an easy and safe connection to the Projectile to be filled and to the compressed air source as well.

MAXimum Versatility

Line Projectile

The line projectile will deploy a variety of lines over a range of distances, depending on the service pressure and the type of line used.

High Pressure Projectile

The service pressure of the HP projectile is 4,500 psi. The additional volume and pressure results in about twice the range capability compared to standard line projectile.

Training Projectiles

These projectiles are designed for training or repeated use when deploying a line from the launch point to a hard surface such as 'ship-to-ship' line deployment. The protective cover is made of low-recoil urethane material, providing protection for the projectile and reducing projectile 'bounce' on arrival. Available in red or luminescent.

"Pelican" Transport/Storage Case

An unbreakable, watertight, dust proof, chemical resistant and corrosion proof transport/storage case made of ultra impact-resistant structural copolymer.

Cordura Kit Carry Bag

Cordura fabric carry bag is designed for durability and convenience. Features 1 internal and 2 external zippered storage pockets and a reinforced water-resistant vinyl bottom.

Folding Stock

A 12 in/30 cm folding stock is designed for greater accuracy of deployment and serves as a convenient carry handle in the collapsed position.

Launcher Barrel

Cast from 356-T6 Aluminium, the ALM Launcher Barrel offers ideal weight/strength ratio and features a safety mechanism to prevent accidental discharge.

Climbing Grappling Hook

This fixed hook with three non-barbed tines is fabricated from titanium. Hook tines are coated in polyethylene-based thermoplastic (EFEX) to reduce sound signature. This hook is certified for climbing.

ALM Tool Kit

A rugged case with molded inserts contains each of the tools required to service and repair an ALM kit.

Tactical Ladder

Lightweight, durable, and acoustically covert. Constructed of nylon webbing with fiberglass rungs at 12 in/30 cm o.c., this ladder is available in 50 ft/15m or 65 ft/20m lengths that can be fully deployed vertically. Side members have a combined breaking strength of 4,800 lbs/2,180 kg.

** Custom lengths available*

RGES SF40 Payload

Running Gear Entanglement System SF40 Payload is the non-lethal option for vessel stopping. Payloads should be used with the High Pressure ALM Kits. Stand off distance from the non-compliant vessel is 20 meters.

Climbing Line

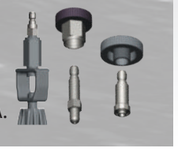
Standard Rope sizes come in diameters of 5.5, 7.0, 8.4, and 11 mm. All climbing lines are black and come packaged in a compact or large line container. End-user specified ropes with specific diameters are available upon request.

Grappling Hook with Barbed Tips

A titanium 3-pronged hook complete with barbed tips to ensure anchoring. Hook tines are coated in polyethylene-based thermoplastic (EFEX) to reduce sound signature.

Quick Connect/Disconnect Fittings

Used to easily and quickly connect/disconnect the Streamline Filler Hose Assembly to/from the compressed air source. Different fittings are available for interface with each of DIN, SCBA, and SCUBA.



* US Patents #5,690,524; RE36,965 of 5,584,736; and other Patents Pending.

TECHNICAL SPECIFICATIONS

ALM Launcher
Part # 540

Specification	Measurement	
Length (Folding Stock Closed)	16.8 in	42.5 cm
Length (Folding Stock Open)	28.7 in	72.9 cm
Height (Folding Stock Closed)	13.2 in	21.6 cm
Height (Folding Stock Open)	8.5 in	33.5 cm
Barrel Width	3.9 in	9.9 cm
Weight	4.4 lbs	2.0 kg
Launcher Housing	356-T6 Aluminum	
Color	Black	
Shape	Irregular	
Internal Mechanism	Stainless Steel	

Filler Hose Assembly
Part # 911-S; 912-S; 913-S

Specification	Measurement	
Overall Length	42.8 in	108.6 cm
Hose Diameter	0.5 in	1.3 cm
Total Weight	2.2 lbs	1.0 kg
Overall Service Rating	5,000 psi	345 BAR
Hose Material	Nylon and Aramid Fiber	
Hose Finish	Black Urethane	
Filler Block Material	6061-T6 Aluminum	
Filler Block Finish	Black Anodized	
Bleed Screw	Stainless Steel and Nylon	
Adapters (DIN, SCBA, SCUBA)	Stainless Steel	

Projectiles

Part #	Part Description	Length		Diameter		Weight		Service Pressure		Cover Material	Cover Color
		in	cm	in	cm	lbs	kg	psi	bar		
300-S	Standard Projectile	13.40	34.03	2.38	6.03	1.8	0.8	3,000	207	Polyethylene	Black
305-S 306-S	Training Projectile	13.72	34.85	2.28	5.79	1.9	0.9	3,000	207	High-Density Urethane	Red or Luminescent
310-S	HP Projectile	17.0	43.1	2.375	6.03	1.8	0.8	4,500	310	n/a	n/a
Projectiles Cylinders material: 6160-T6 Al with black powder-coat finish. Nozzle Assembly material: Stainless Steel.											
Nozzle Protectors material: Glass-Filled Urethane. Color: Black											

Grappling Hook

Part #	Material	Length		Width		Minimum Break Load		Weight	
		in	cm	in	cm	lbs	kg	lbs	kg
750	6AL-4V Grade 5 Titanium	12.0	30.5	Irregular		2,200	1,000	1.5	0.7
Safe working load: 730 lbs / 330 kg. Grappling Hook Nose Cone material: Glass-Filled Urethane.									

Tactical Ladder Options

Part #	Material	Length		Width		Minimum Break Load		Weight per Length	
		ft	m	in	cm	lbs	kg	lbs	kgs
744	Nylon with Fiberglass Rungs	50	15	6.0	15.2	4,800	2,180	5.8	2.6
746	Nylon with Fiberglass Rungs	65	20	6.0	15.2	4,800	2,180	7.4	3.4
Safe working load: 730 lbs / 330 kgs. Fiberglass Rungs are covered with non-slip Neoprene jacket.									
Line Containers material: Polyethylene with Stainless Steel hinges. Shape: Irregular. Color: Black.									
Compact Line Container Weight: 1.8 lbs / 0.8 kg. Large Line Container Weight: 2.9 lbs / 1.3 kg.									

Rope Options

Part #	Material	Diam.	Color	Minimum Break Load		Weight per Length		Length	
		mm		lbs	kg	lbs	kg	ft	m
801	HMPE & Nylon	7	Black	5,780	2622	4.3	2.0	165	50
802	HMPE & Nylon	5.5	Black	3,200	1,194	5.2	2.6	330	100
803L	Spectra	4	White	1,500	680	3.5	1.6	1,000	304
815	Nylon	8.4	Black	3,442	1,565	7.7	3.5	230	70
817	Nylon	11	Black	6,744	3,059	8.3	3.8	165	50
Line Containers material: Polyethylene with Stainless Steel hinges. Shape: Irregular. Color: Black.									
Compact Line Container Weight: 1.8 lbs / 0.8 kg. Large Line Container Weight: 2.9 lbs / 1.3 kg.									

Bags and Cases

Part #	Part Description	Length		Width		Height		Weight	
		in	cm	in	cm	in	cm	lbs	kg
908	Kit Bag	28.0	70.0	14.0	35.0	16.0	41.0	2.3	1.0
Kit Bag material: 1,000-Denier Cordura, waterproof Vinyl, and Nylon. Color: Black with reflective markings.									
908	Pelican Case - Small	31.59	80.2	20.47	52.0	12.45	31.6	29.3	13.3
909	Pelican Case - Large	31.59	80.2	22.99	58.4	19.48	49.5	37.7	17.1
Pelican Cases material: Copolymer with Black finish.									

**Please Note: All values are displayed as maximum, external measurements.*

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MAXimum Distance.

MAXimum Safety.

MAXimum Performance.

RESCUE SOLUTIONS INTERNATIONAL INC.

"The Global Leader in intrinsically safe line-throwing equipment"