



# MCAS-500 SERIES

MISSION CONFIGURABLE AIRCRAFT SYSTEM

 DILLON AERO



# MCAS - 500AH

MISSION CONFIGURABLE AIRCRAFT SYSTEM



## DILLON AERO, INC. PROPRIETARY

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# THE STANDARD

## > LIGHT ATTACK HELICOPTERS

The Dillon Aero Mission Configurable Aircraft System provides an exceptional armament solution for the MD500 series of helicopters. Years of direct, hands-on experience coupled with exceptional engineers have produced an armament platform that is lighter, more capable, and easier to support than other systems currently available.

Airframe sustainability and useful load benefit from the decreased overall weight; generally 70 pounds compared to legacy systems. The aircraft can now carry more ammunition, fuel, or additional weapons systems.

Depending on the mission profile the user has endless configuration options utilizing up to 6 weapon stations. MCAS can easily and quickly be configured for Hellfire, M134D, GAU-19B, HMP-400, M260, or M261 rocket launchers based on mission requirements. The outer wing sections are capable of Smart Weapon Enhancements such as the Raytheon Griffin® B launcher. MCAS supports any combination of 3000 or 1500 round 7.62mm magazines, and/or 600 round .50 caliber magazines. All of the lightweight magazines have an identical footprint that lock into common points.

The outboard wing sections fold 180° to reduce the lateral dimension to 86 inches. This results in easier transport and a smaller hangar footprint. Damage prone areas are easily replaced in the field. It is not necessary to replace an entire plank because of localized damage. MCAS wings are interchangeable between aircraft. With complete interchangeability between airframes, there is no need for tail number specific hardware. This provides the user greater flexibility.

To allow for faster reload times and diminish stress on crew, we have reduced lift height, and provided smooth obstruction-free magazine rails. Cables are routed through fairings that provide protection from the environment. A pass-through within the center section allows flex chuting to be mounted completely underneath the wing eliminating interference during arming.

# GENERAL OVERVIEW

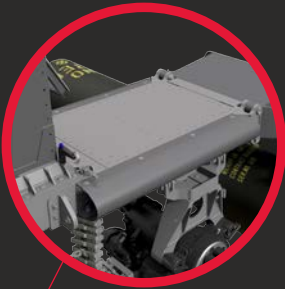
All flexible ammunition feed chute routing is 'under wing' leaving the upper surfaces flat for easy reload

Cable fairings to protect weapons cabling

All magazines utilize the same interface

Center section is interchangeable between aircraft with A-kit installed

All stations are bore-sightable



# LIGHTWEIGHT

128 POUNDS AS DEPICTED

Far outboard stations also support ALKAN 2037 ejector racks and Marvin MA-4B (different hardware)

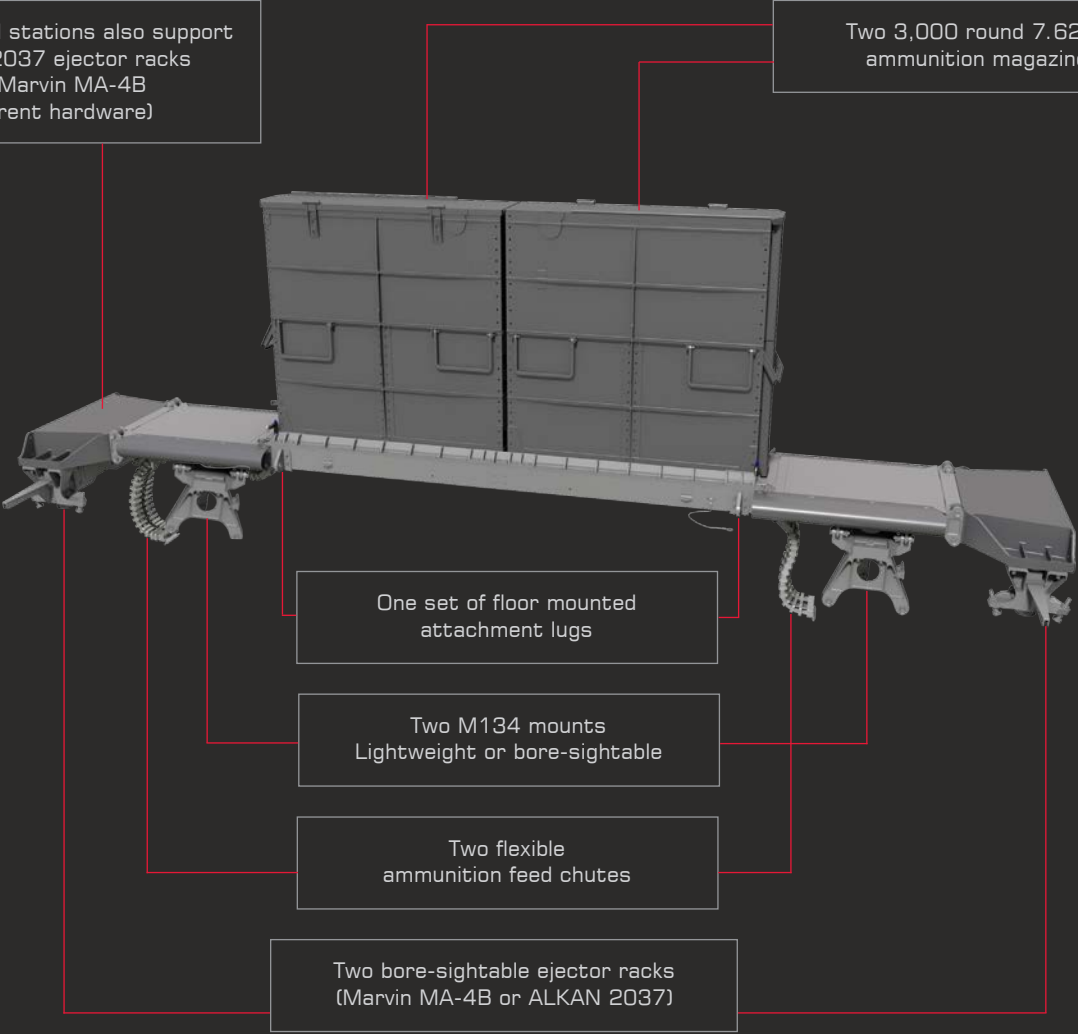
Two 3,000 round 7.62mm ammunition magazines

One set of floor mounted attachment lugs

Two M134 mounts Lightweight or bore-sightable

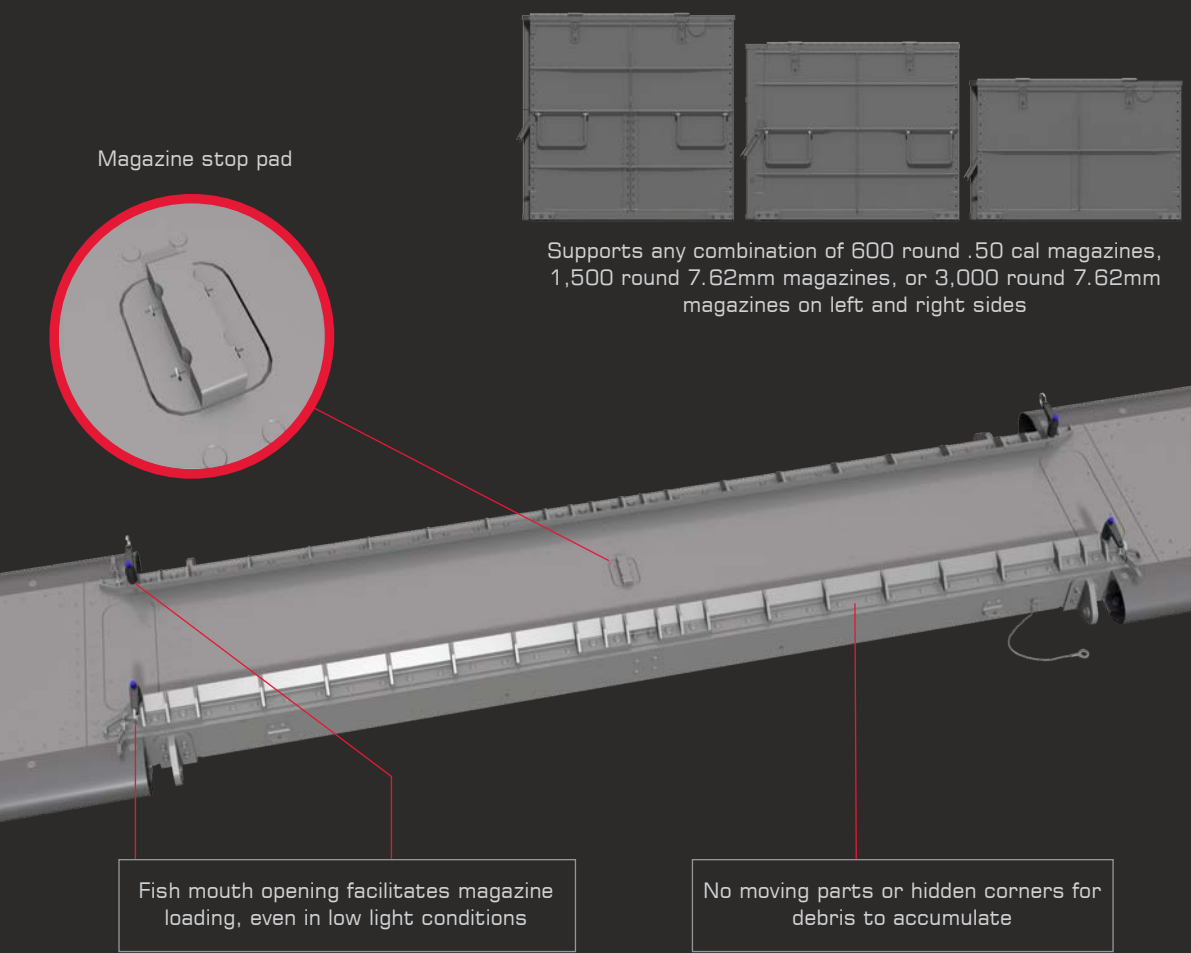
Two flexible ammunition feed chutes

Two bore-sightable ejector racks (Marvin MA-4B or ALKAN 2037)

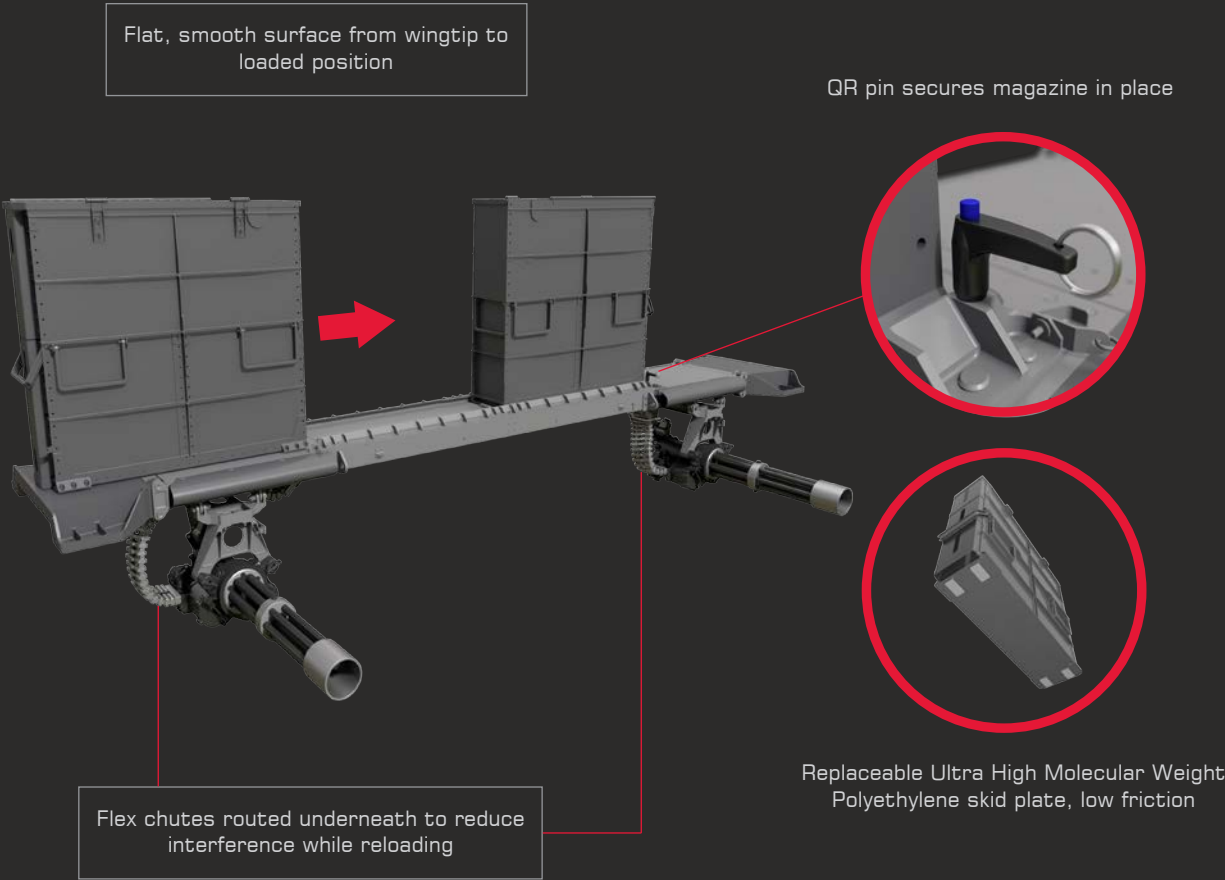




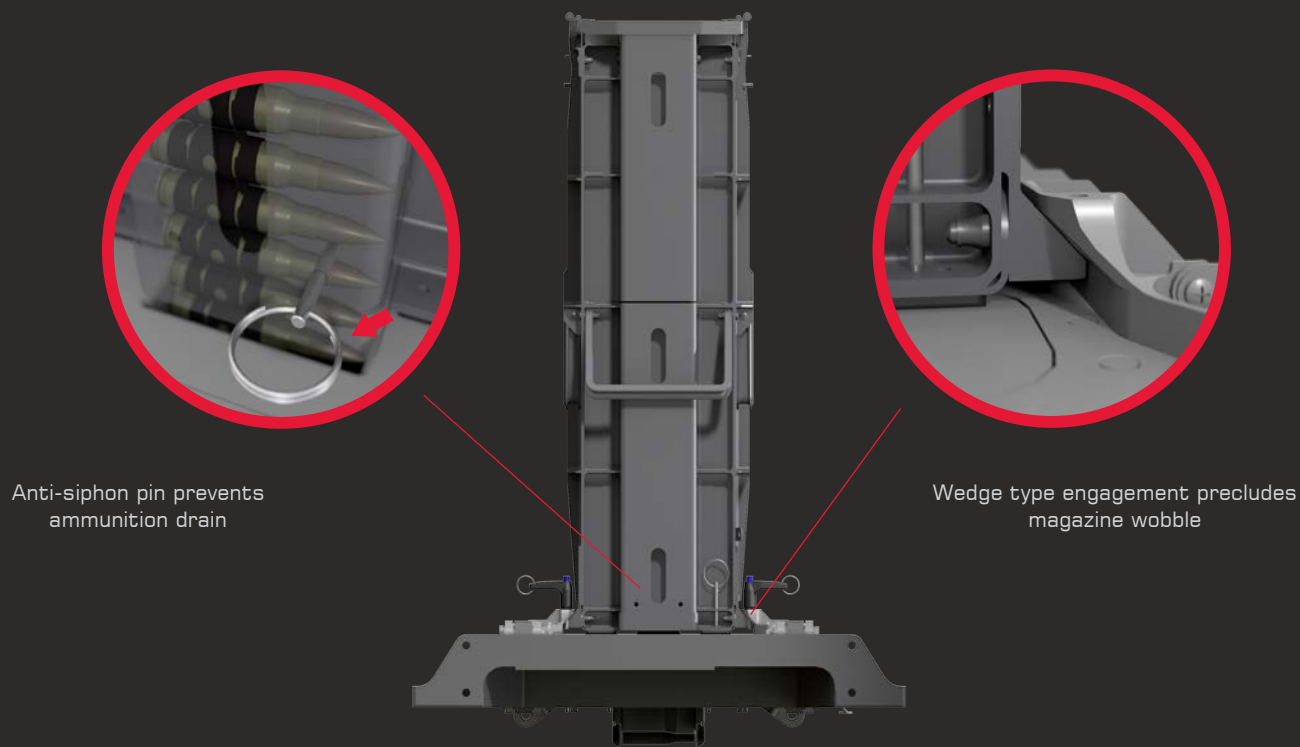
# MAGAZINE RAIL SYSTEM



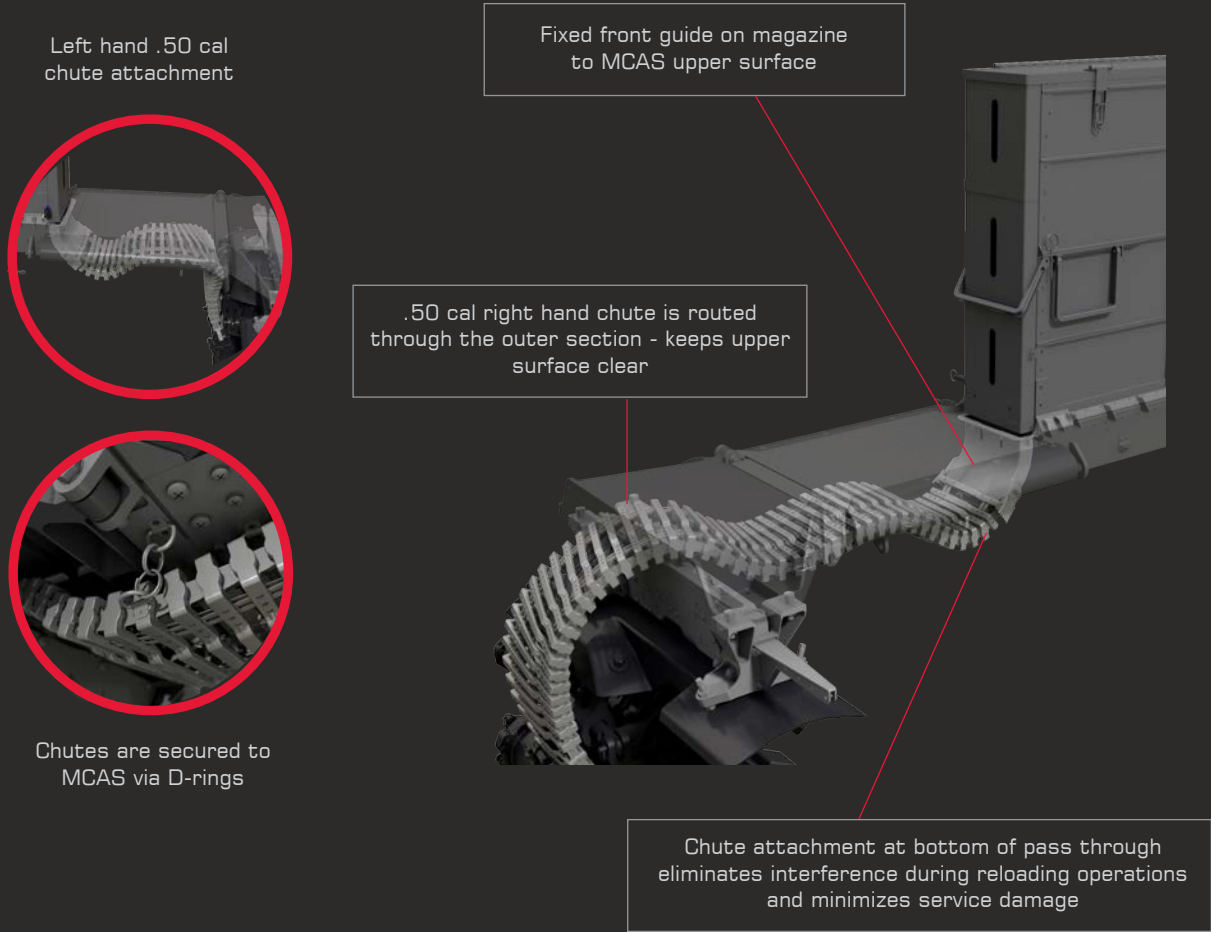
# RELOADING OF LIGHTWEIGHT MAGAZINES



# LIGHTWEIGHT MAGAZINE FEATURES



# INTEGRATED AMMUNITION CHUTES



## FAMILY OF LIGHTWEIGHT MAGAZINES WITH INTEGRATED FEED CHUTES



7.62mm, 3,000 rounds  
21 lbs

.50 cal, 600 rounds  
14 lbs

7.62mm, 1,500 rounds  
15 lbs

- Maintain proven functional features of Dillon design
- Optimize can stiffness with integral machined ribs
- Integrated handle provisions for 2 man lift
- Integrated mounting provisions at base
- Magazine interface to MCAS is identical for 7.62mm or .50 cal

## COMPOSITE DOOR WITH LIGHTNING PROTECTION

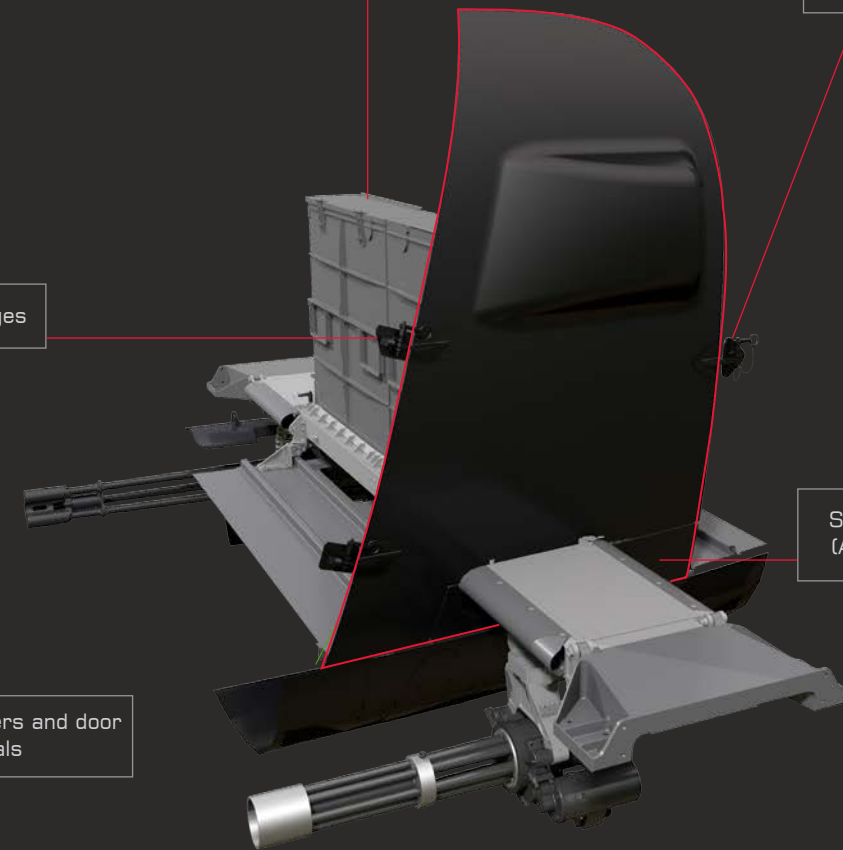
Functional with  
ammunition magazines

Meeker hinges

Latch with ball lock detent

Silicone wipers and door  
seals

Separate lower close-out panel  
(Attached to MCAS - Optional)

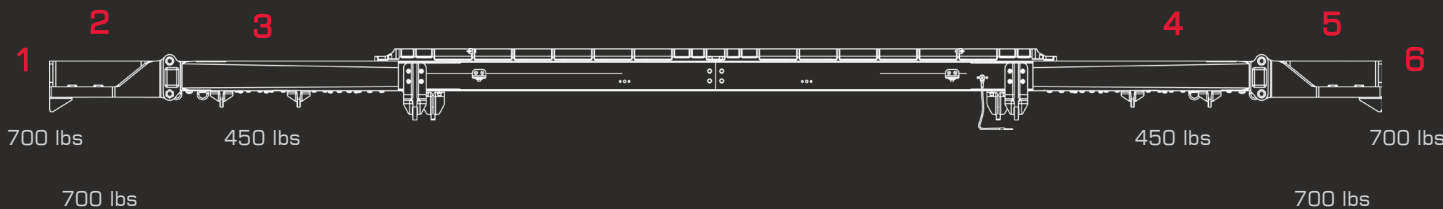


MISSION CONFIGURABLE AIRCRAFT SYSTEM

MCAS - 500AH  
CONFIGURATION  
OPTIONS\*

LEFT SIDE WEAPON STATIONS

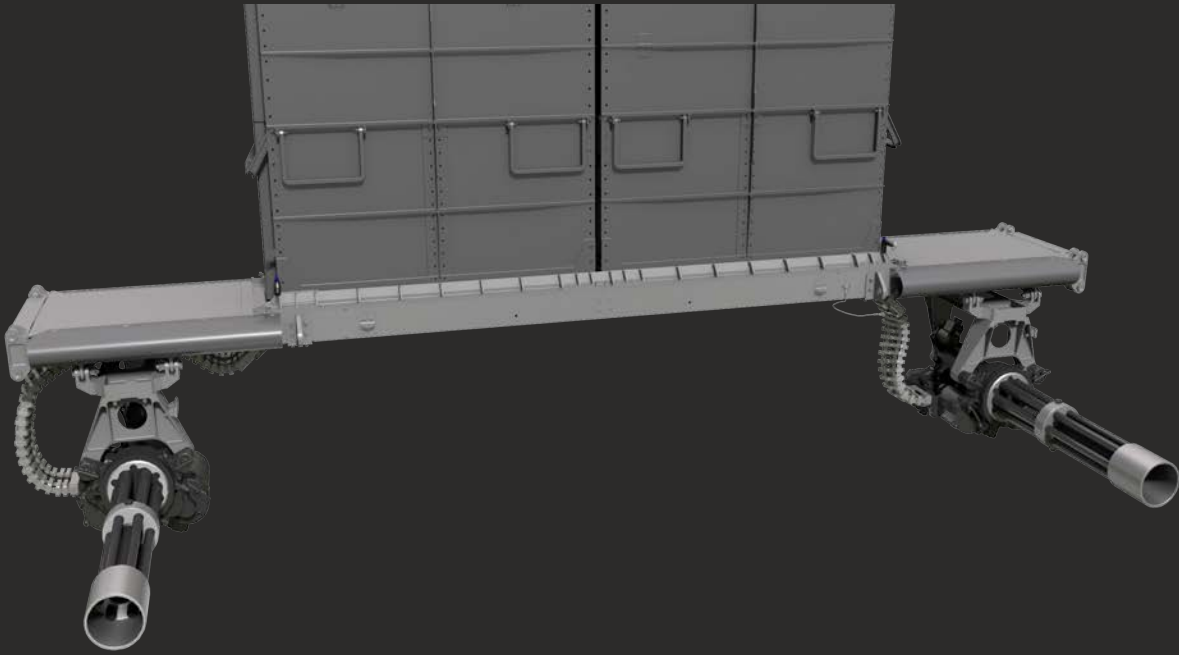
RIGHT SIDE WEAPON STATIONS



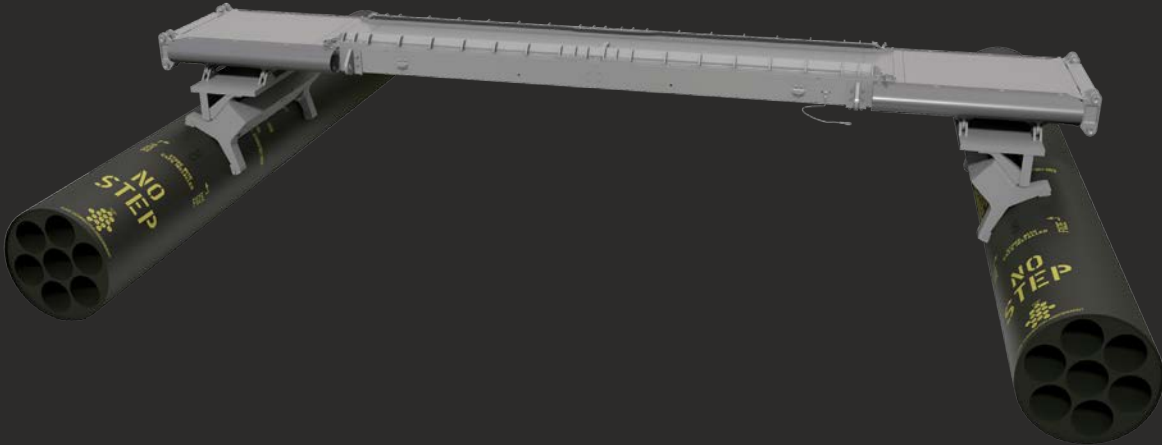
\*Not limited to the demonstrated configurations.

\*Demonstrated above: Weight capacity of individual stations.





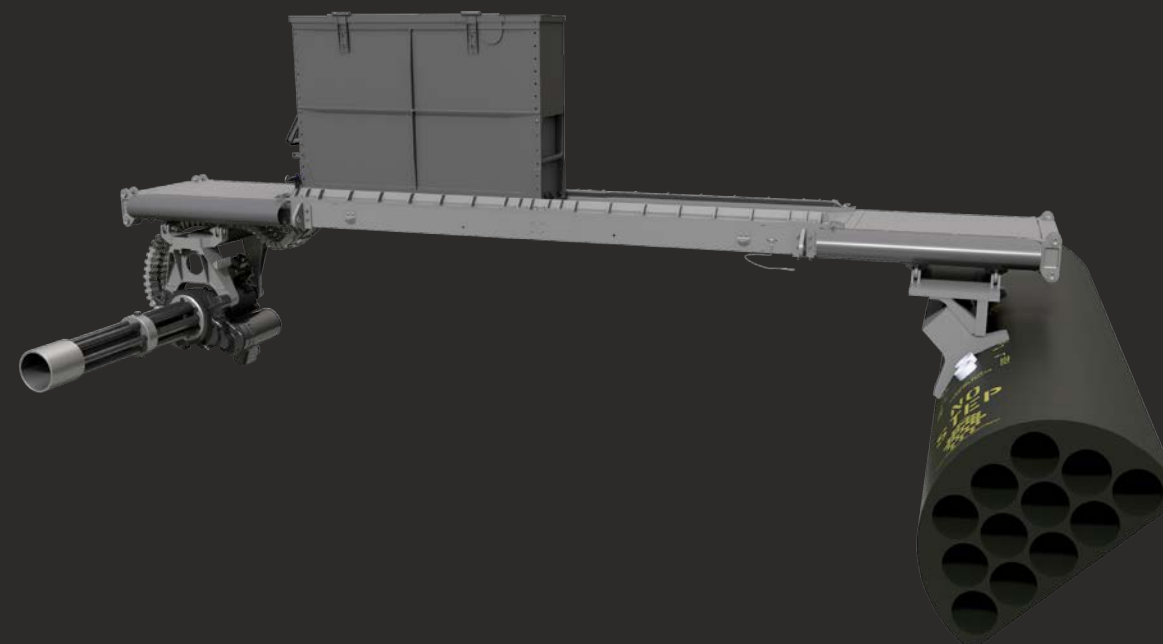
DUAL M134D MINIGUNS



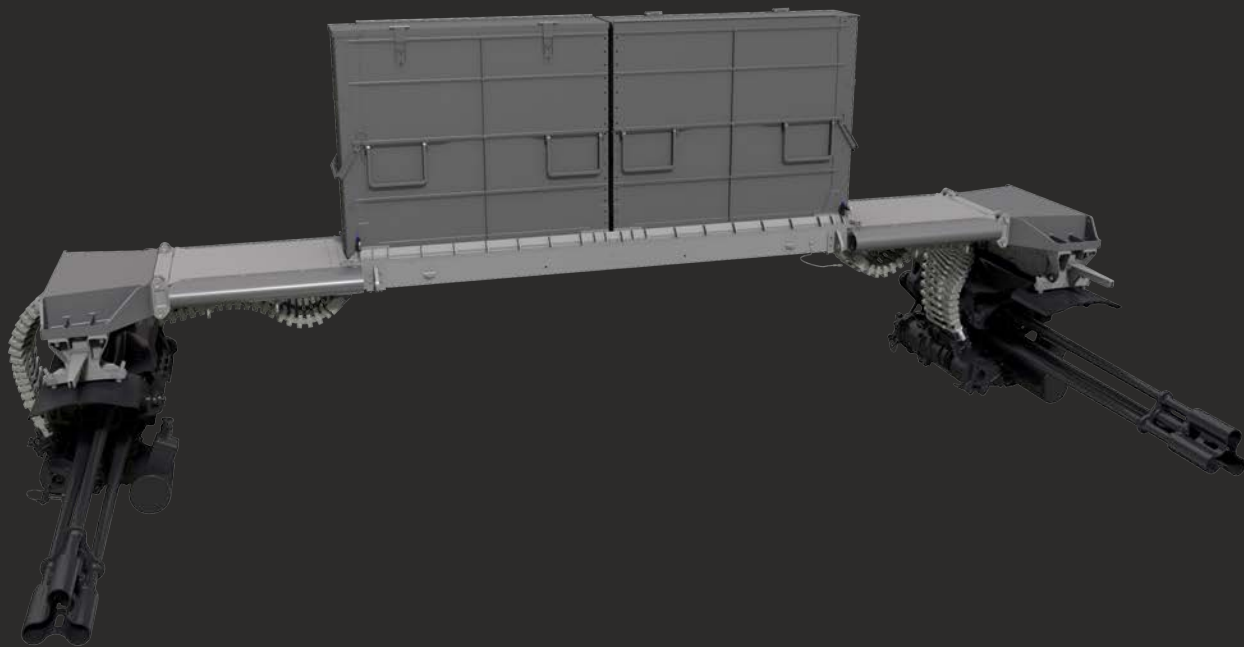
DUAL M260 ROCKET LAUNCHERS



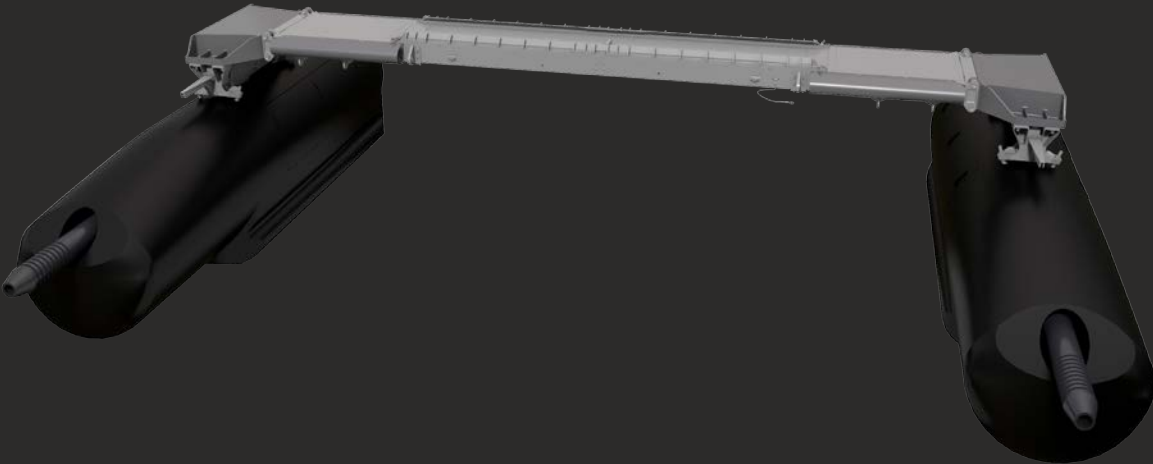
M260 ROCKET LAUNCHER & M134D MINIGUN



M134D MINIGUN & LWL12 ROCKET LAUNCHER



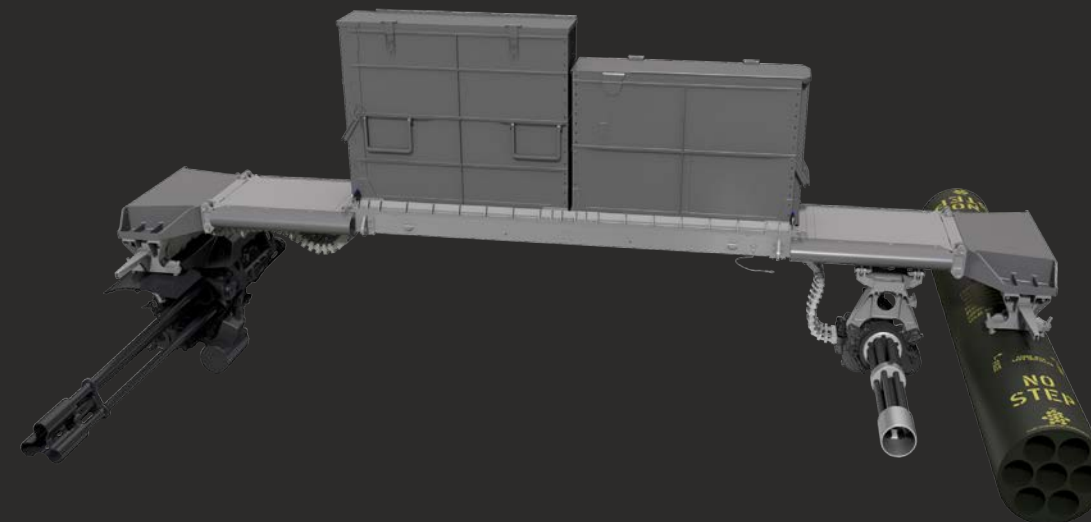
DUAL GAU - 19B



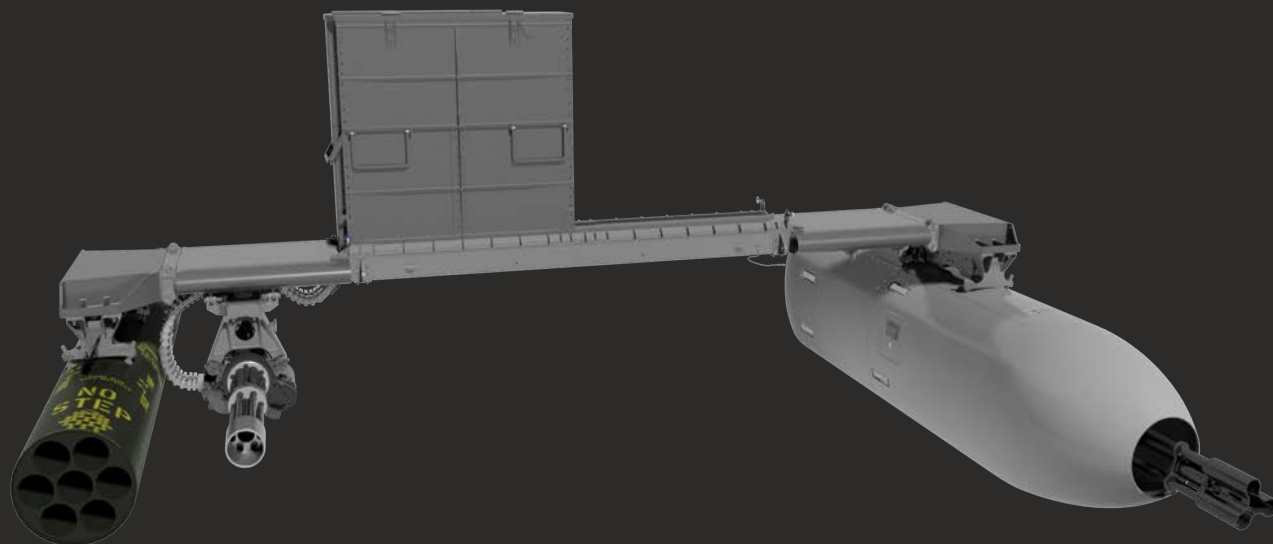
DUAL HMP - 400



DUAL TWIN HELLFIRE RAILS



GAU -19B, M134D MINIGUN & M260 ROCKET LAUNCHER

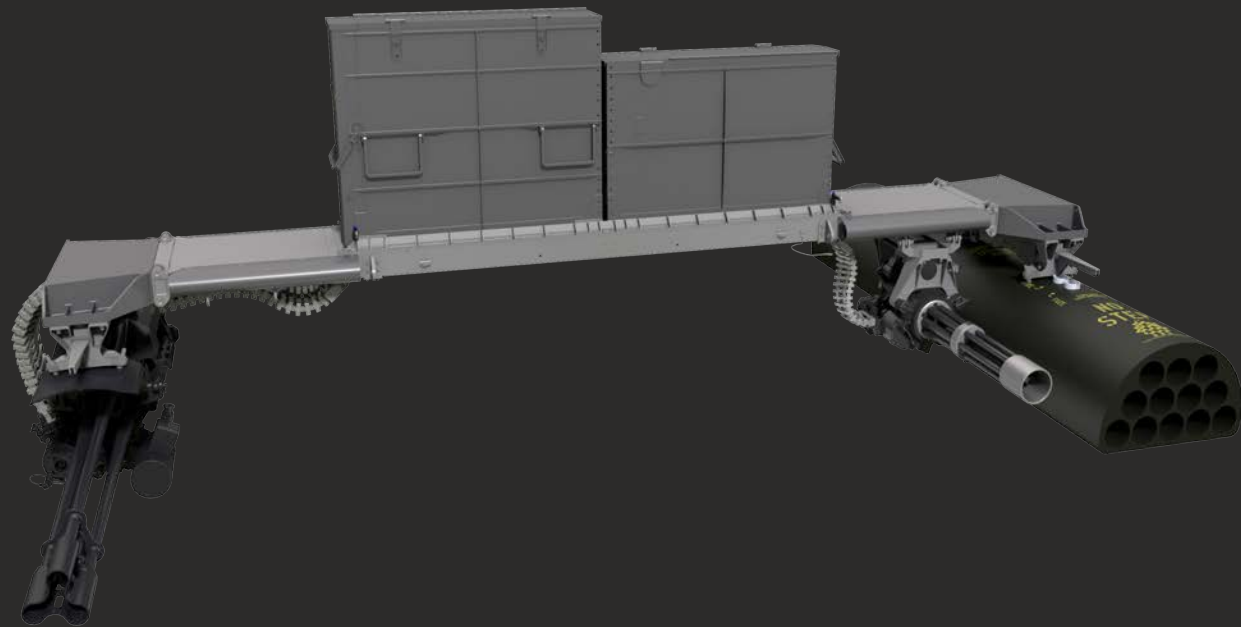


M260 ROCKET LAUNCHER, M134D MINIGUN & GP-19

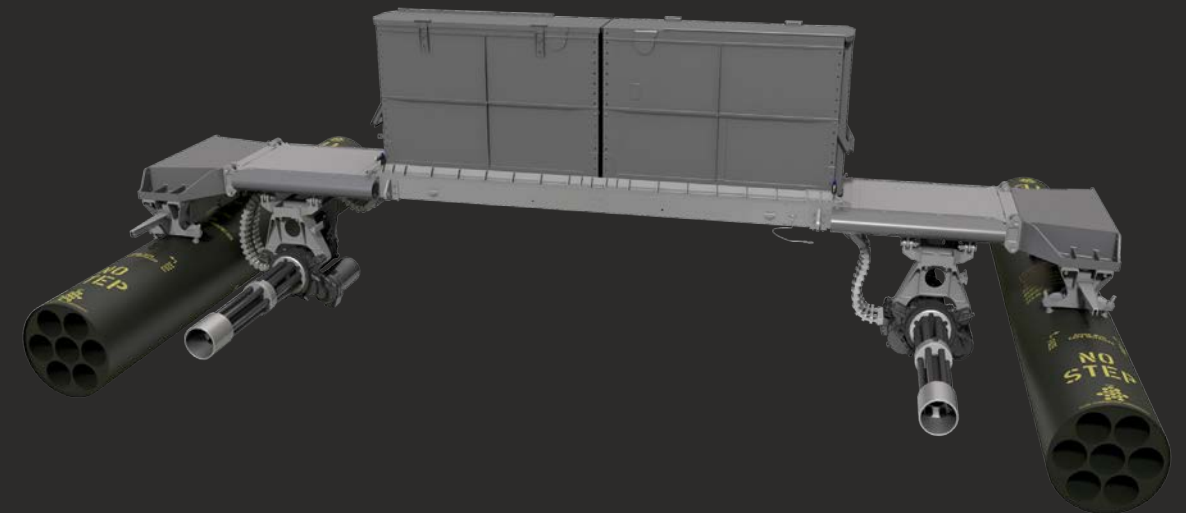


TWIN HELLFIRE RAIL, M134D MINIGUN & M260 ROCKET  
LAUNCHER

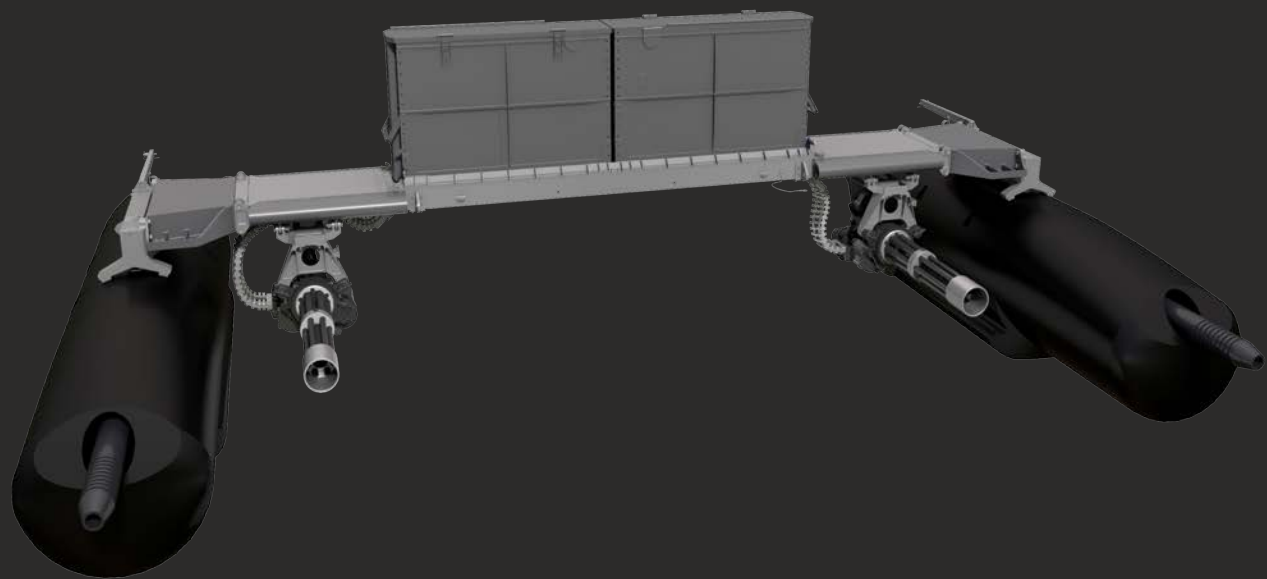




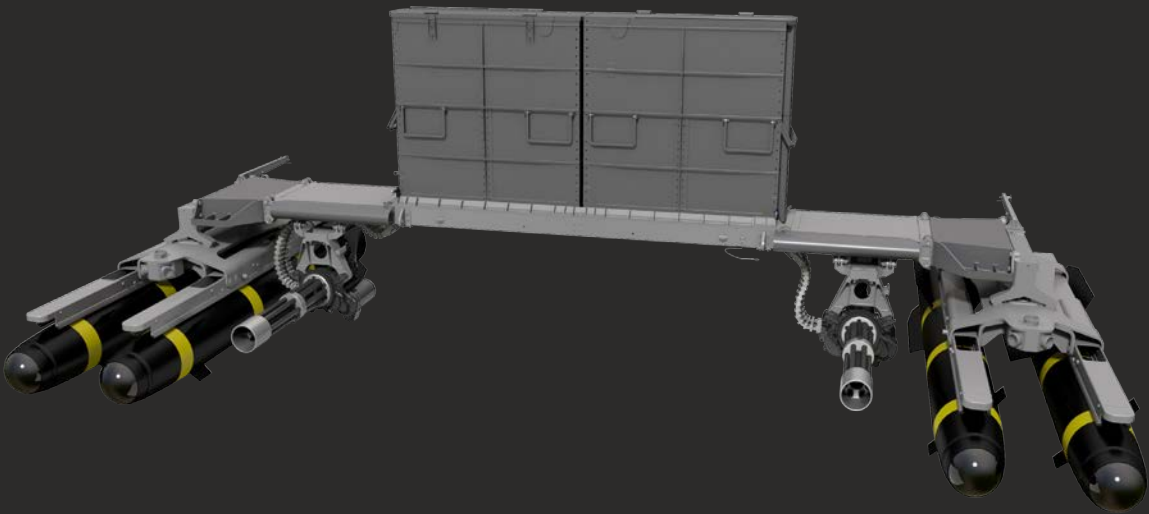
GAU - 19B, M134D MINIGUN & LWL12 ROCKET LAUNCHER



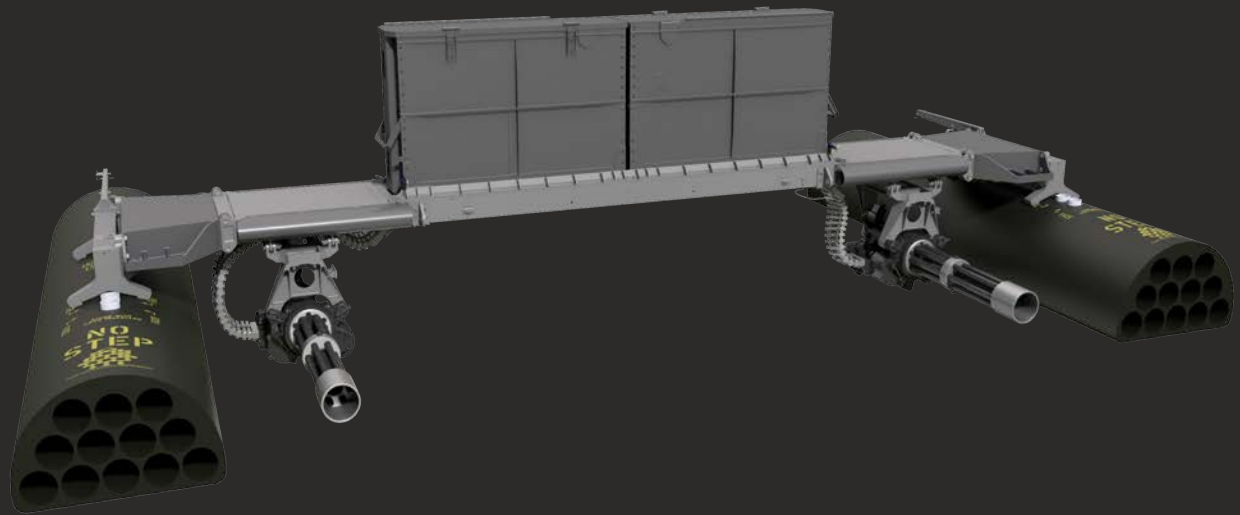
DUAL M260 ROCKET LAUNCHERS & DUAL M134D MINIGUNS



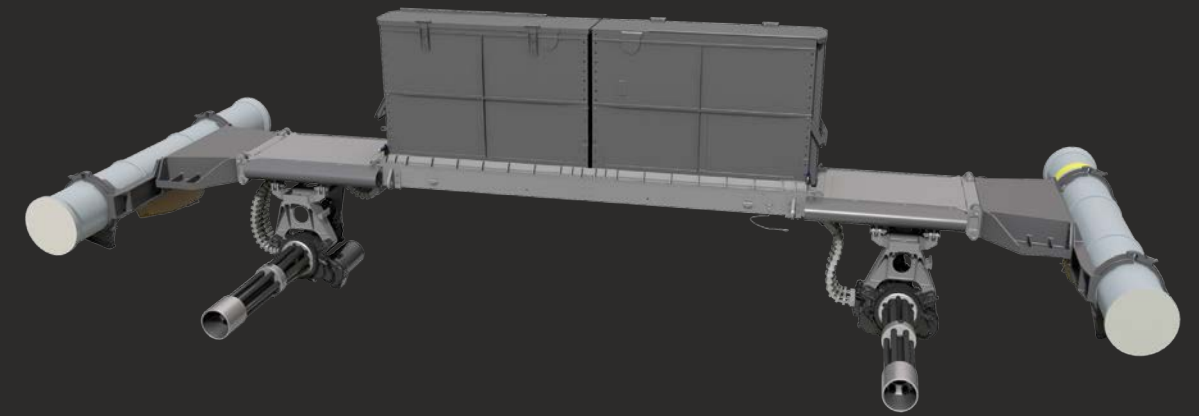
DUAL HMP - 400 & DUAL M134D MINIGUNS



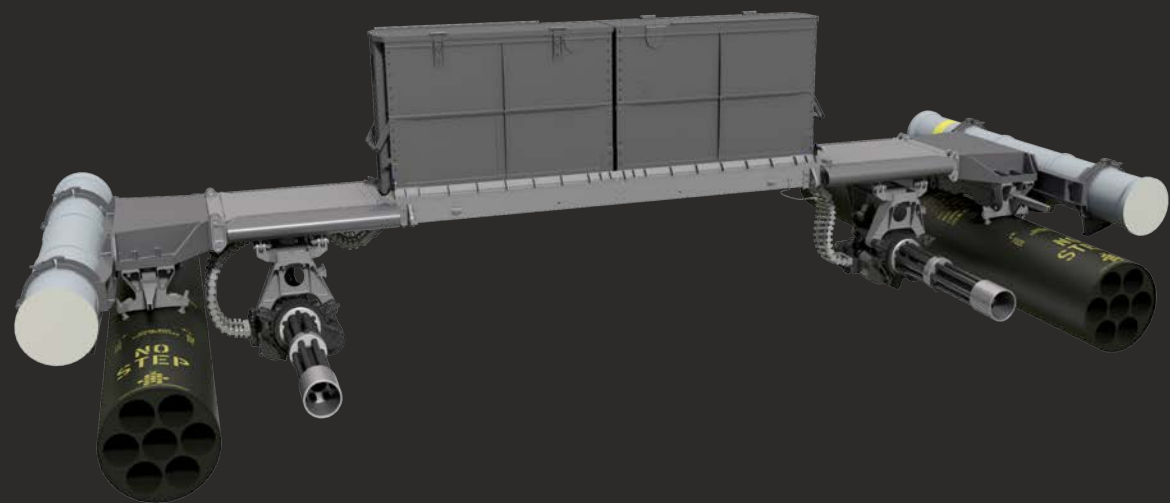
DUAL TWIN HELLFIRE RAILS & DUAL M134D MINIGUNS



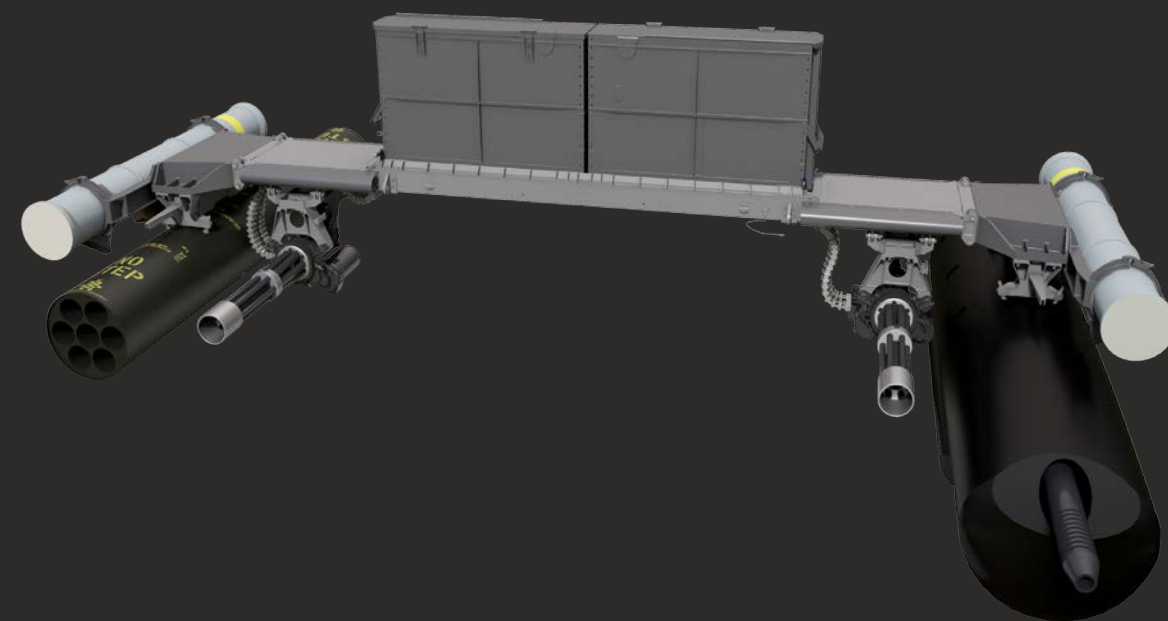
DUAL LWL12 ROCKET LAUNCHERS & DUAL M134D MINIGUNS



DUAL RAYTHEON GRIFFIN® B LAUNCHERS & DUAL M134D  
MINIGUNS



DUAL RAYTHEON GRIFFIN® B LAUNCHERS, DUAL M260  
ROCKET LAUNCHERS & DUAL M134D MINIGUNS



DUAL RAYTHEON GRIFFIN® B LAUNCHERS, M260 ROCKET  
LAUNCHER, DUAL M134D MINIGUNS & HMP - 400

# MCAS WEIGHT SUMMARY

TRIPS CONFIGURATION						
System Weights						
	Legacy*		Phase 2*		Phase 3*	
	Lb	Kg	Lb	Kg	Lb	Kg
A-Kit	17.50	7.94	20.51	9.30	6.12	2.78
B-Kit	102.60	46.54	73.11	33.16	73.11	33.16
Weapon Specific Hardware						
GAU-19	-	-	-	-	-	-
.50 cal magazine	17.50	7.94	13.60	6.17	13.60	6.17
.50 cal feed chute	6.70	3.04	5.79	2.63	5.79	2.63
.50 cal pass-through	0.00	0.00	0.37	0.17	0.37	0.17
M-134	-	-	-	-	-	-
M-134 Mount	10.80	4.90	3.60	1.63	3.60	1.63
7.62mm 3,000 round magazine	28.00	12.70	20.46	9.28	20.46	9.28
7.62mm feed chute	2.60	1.18	0.82	0.37	0.82	0.37
7.62mm pass-through	0.00	0.00	0.38	0.17	0.38	0.17
M260	-	-	-	-	-	-
Total:	185.70	84.23	138.64	62.89	124.25	56.36
Delta:	N/A	N/A	-47.06	-21.35	-61.45	-27.87

\*FOR SYSTEM WEIGHT ESTIMATION ONLY.

\*LEGACY - WEIGHT DATA FROM AWR DOCUMENT AND LEGACY OPERATOR'S MANUAL

\*PHASE 2 - UTILIZES EXISTING MK4 RAIL; WEIGHTS ARE ACTUALS

\*PHASE 3 - REPLACES MK4 RAIL WITH DILLON A-KIT (FAA/AED APPROVED); WEIGHTS ARE ACTUALS

# MCAS WEIGHT SUMMARY

DUALS CONFIGURATION						
System Weights						
	Legacy*		Phase 2*		Phase 3*	
	Lb	Kg	Lb	Kg	Lb	Kg
A-Kit	17.50	7.94	20.51	9.30	6.12	2.78
B-Kit	102.60	46.54	73.11	33.16	73.11	33.16
Weapon Specific Hardware						
M134 x 2	-	-	-	-	-	-
M134 Mount x 2	21.60	9.80	7.20	3.27	7.20	3.27
7.62mm 3,000 round magazine x 2	56.00	25.40	40.92	18.56	40.92	18.56
7.62mm feed chute RH	3.10	1.41	1.70	0.78	1.70	0.78
7.62mm feed chute LH	2.60	1.18	0.82	0.37	0.82	0.37
7.62mm pass-through	0.00	0.00	0.52	0.24	0.52	0.24
M260	-	-	-	-	-	-
Total:	203.40	92.26	144.78	65.68	130.39	59.15
Delta:	N/A	N/A	-58.62	-26.58	-73.01	-33.11

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#### Dillon Aero MCAS for 369/MD-530

- Six stations
- Fully qualified
- Lightweight
- Designed by SOF aviation users
- Field maintainable/repairable
- Complete airframe interchangeability
- Foldable for easy transportability
- Clean/efficient design for ease of operation
- Compatible with future Precision Guided Munitions



# MCAS - 500MH

MISSION CONFIGURABLE AIRCRAFT SYSTEM







# THE STANDARD

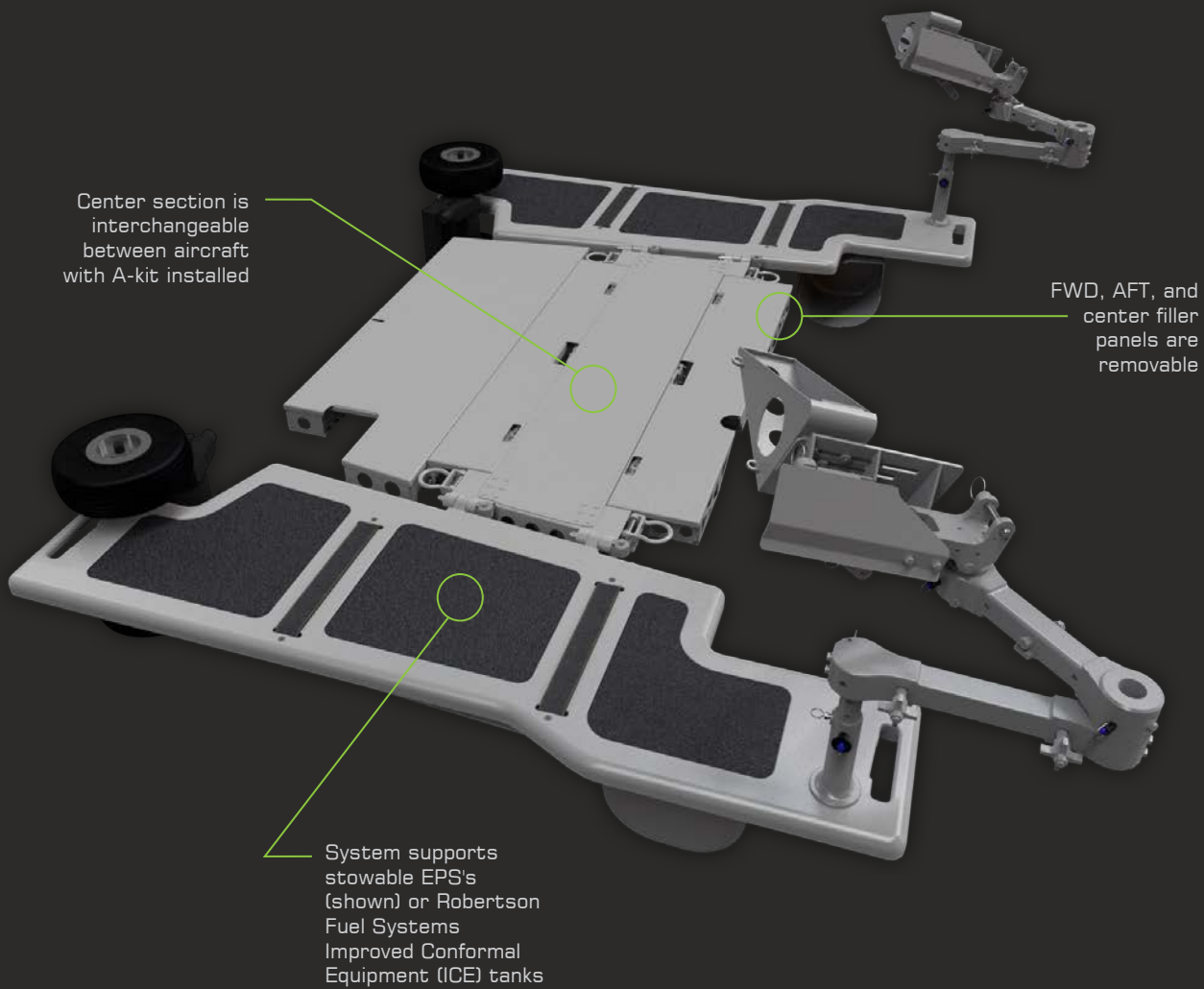
## > LIGHT ASSAULT HELICOPTERS

The Dillon Aero Mission Configurable Aircraft System (MCAS-MH) provides an exceptional armament solution for the MD500 series of helicopters. Years of direct, hands-on experience coupled with exceptional engineers have produced an armament platform that is lighter, more capable, and easier to support than other systems currently available.

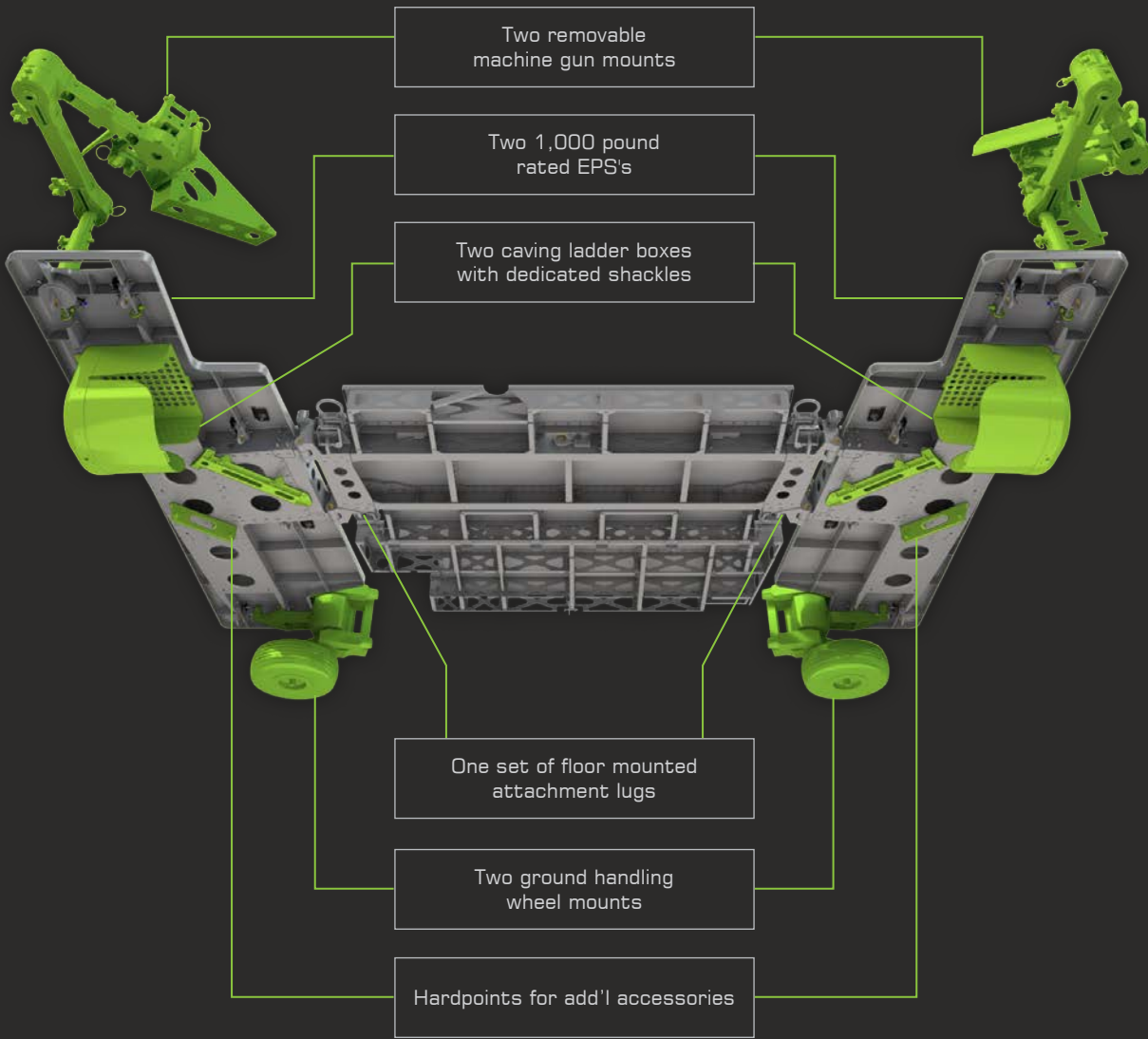
Airframe sustainability and useful load benefit from the decreased overall weight (~60 lbs. base system) compared to legacy systems. The aircraft can now carry more personnel, fuel, or additional Mission Equipment Packages (MEP). Hard-points on the top and bottom of the MCAS-MH provide users with multiple configuration options to suit any mission profile. The system can easily be configured to attach a machine gun, mount, and pintle-arm, caving ladder, FLIR System Electronics Unit (SEU), and ground handling wheel mount. Additionally, the system incorporates up to six removable mounting lugs coupled with additional mounting provisions.

The MCAS-MH (External Personnel Systems) stow to reduce the lateral dimension, resulting in easier transport and a reduced hangar footprint. Damage-prone areas are easily replaced in the field; it is not necessary to replace an entire plank because of localized damage. The MCAS-MH lightweight plank is interchangeable between aircraft; with complete interchangeability between airframes, there is no need for aircraft tail number specific hardware.

# GENERAL OVERVIEW

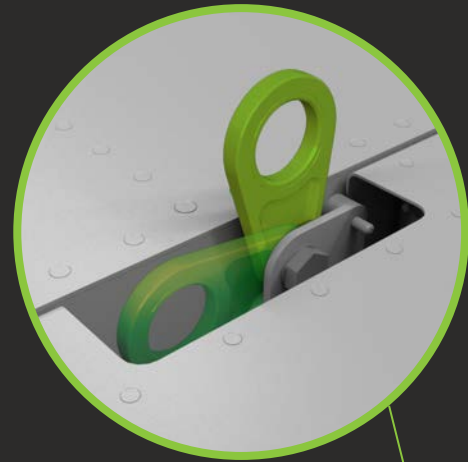


# MISSION EQUIPMENT PACKAGES





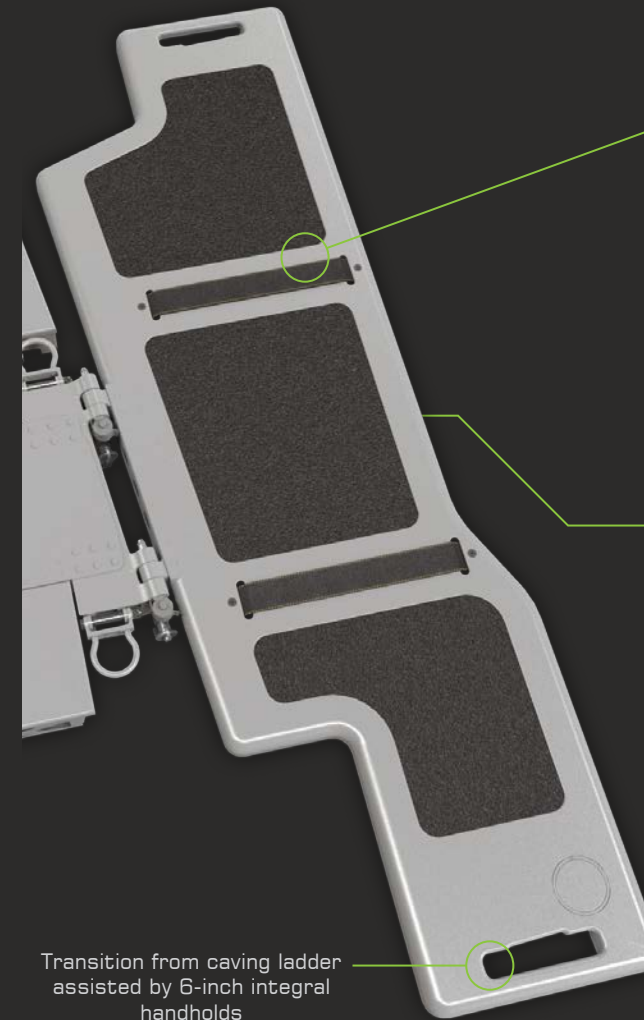
## FILLER PANELS



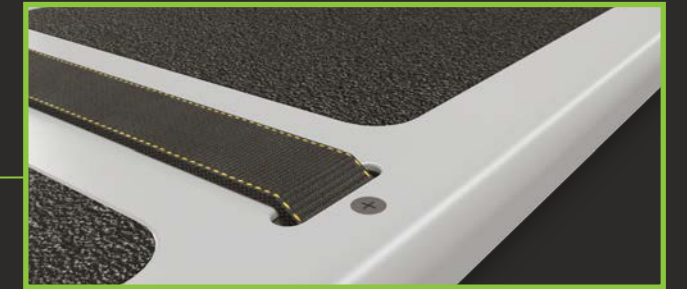
Lugs and tie-downs are easily stowed, leaving the upper surface of the MCAS-MH clear

AFT filler panel can be removed to accommodate a Goliath® Tank

## EXTERNAL PERSONNEL SYSTEM



Transition from caving ladder assisted by 6-inch integral handholds



Features straps and anti-skid surfaces for personnel safety



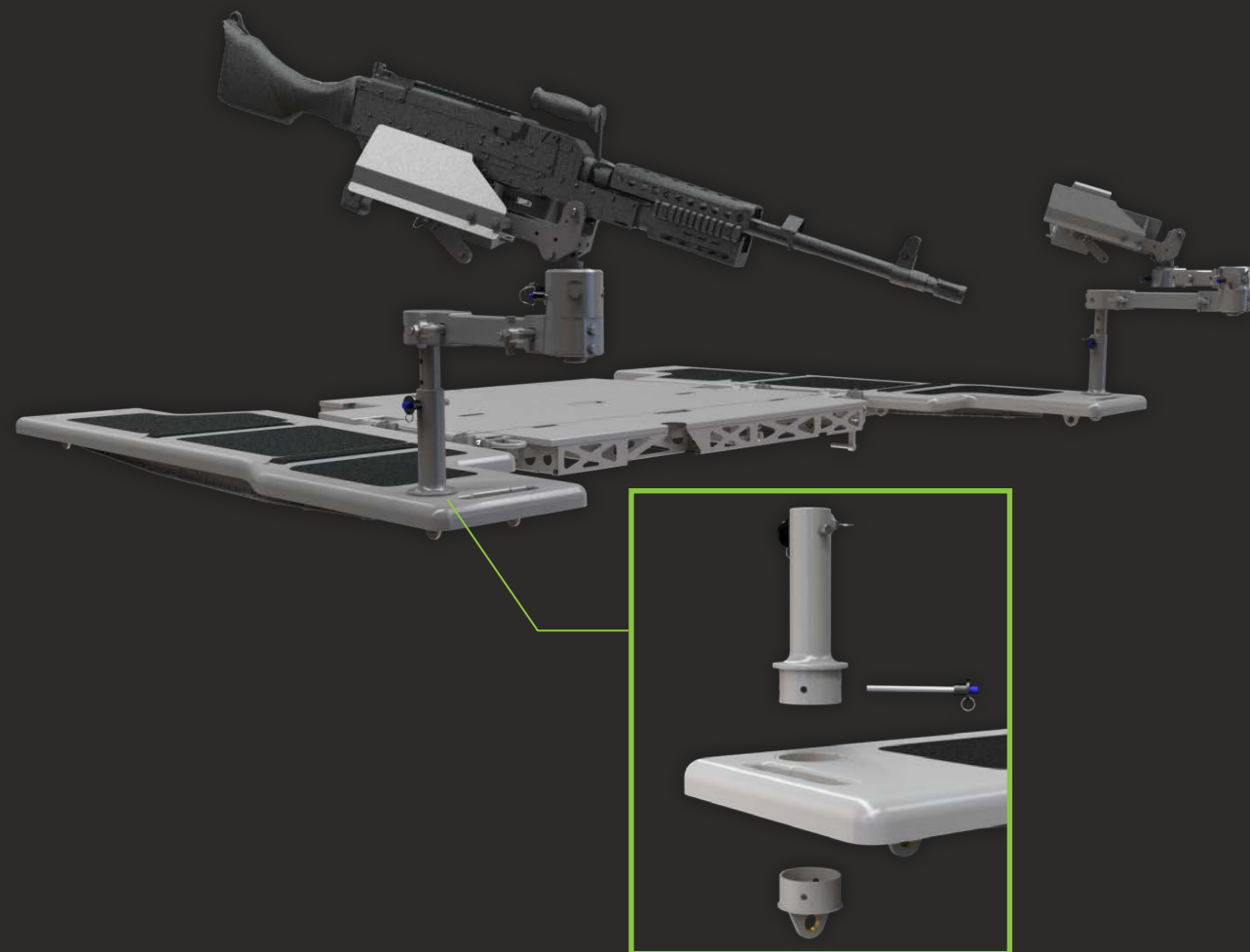
Underside is populated with 6 lugs rated up to 125 lbs.



EPS's are interchangeable with ICE tanks

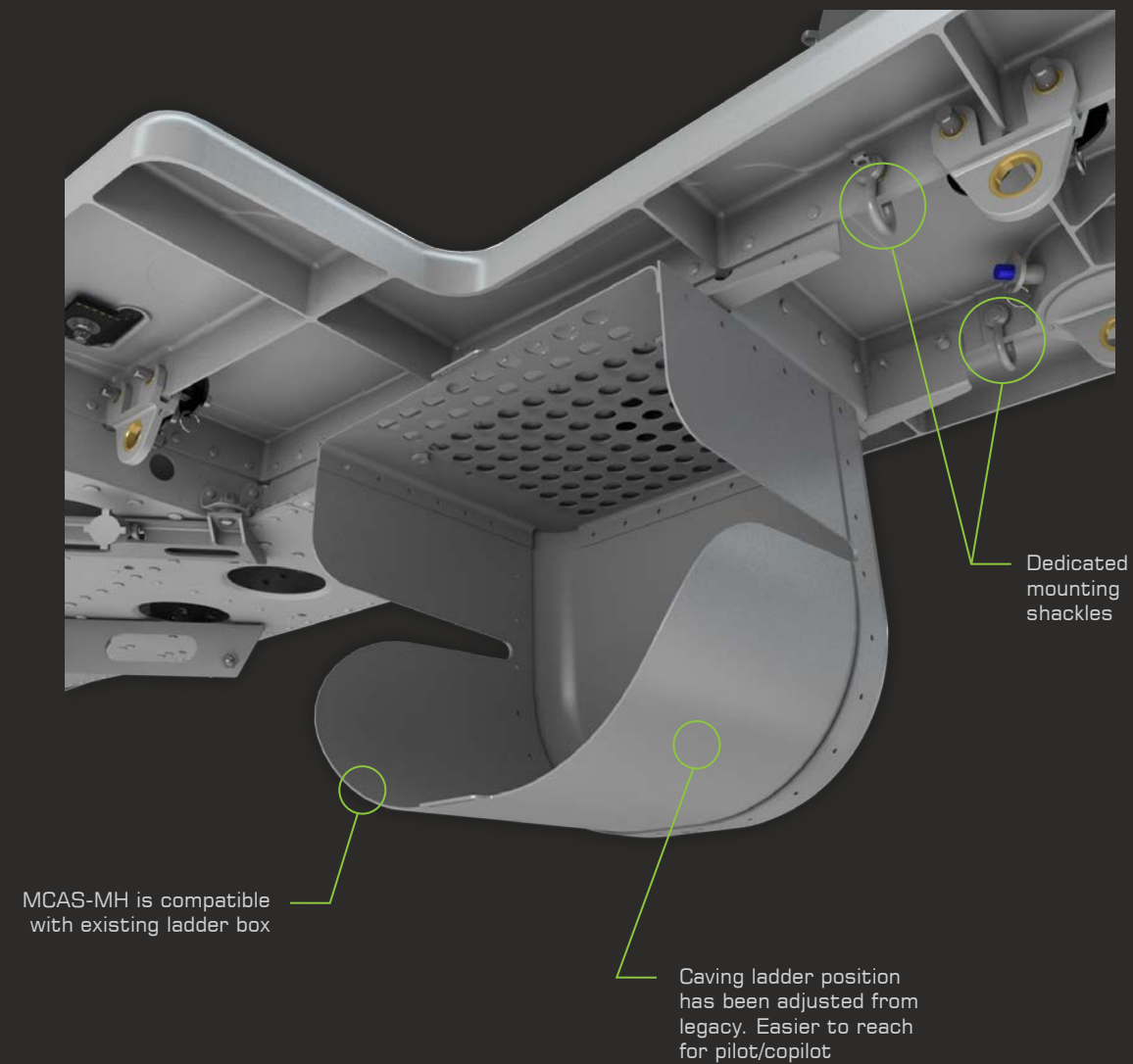


## MACHINE GUN PINTLE



Removable pintle is secured with a single quick-release pin

## CAVING LADDER MOUNT



# WEIGHT SUMMARY

MD530 MCAS MH						
System Weights						
	Legacy*		Phase 2*		Phase 3*	
	Lb	Kg	Lb	Kg	Lb	Kg
Center Section	30.50	13.83	22.09	10.02	22.09	10.02
Forward Filler Panel	6.20	2.81	3.22	1.46	3.22	1.46
Center Filler Panel	-	-	2.39	1.08	2.39	1.08
Aft Filler Panel	12.30	5.58	6.47	2.93	6.47	2.93
External Personnel System x 2	71.80	32.57	50.06	22.71	50.06	22.71
Mk-4C	17.50	7.94	17.50	7.94	-	-
Dillon A-Kit	-	-	-	-	6.12	2.78
Tie Down Ring Universal Joint Kit	6.80	3.08	-	-	-	-
Dillon Mk-4C Rail Adapter x 4	-	-	3.01	1.37	-	-
Base System Total	145.10	65.82	104.74	47.51	90.35	40.98
Delta	N/A	N/A	-40.36	-18.31	-54.75	-24.83
Ground Handling Wheel Mount	3.00	1.40	0.60	0.30	0.60	0.30
Gun Mount	12.00	5.40	0.50	0.20	0.50	0.20

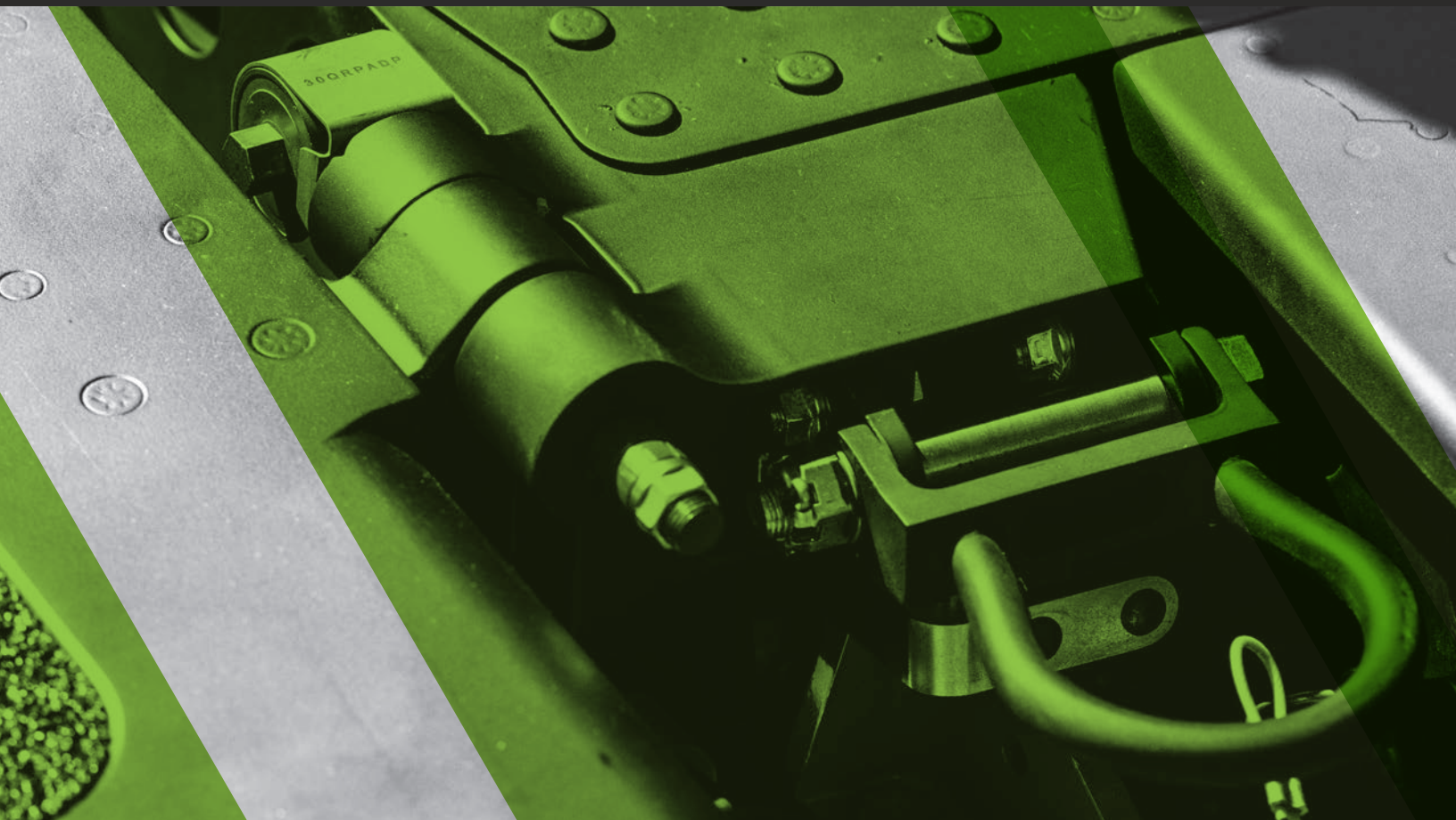
\*FOR SYSTEM WEIGHT ESTIMATION ONLY.

\*LEGACY - WEIGHT DATA FROM AWR DOCUMENT AND LEGACY OPERATOR'S MANUAL

\*PHASE 2 - UTILIZES EXISTING MK4 RAIL; WEIGHTS ARE ACTUALS

\*PHASE 3 - REPLACES MK4 RAIL WITH DILLON A-KIT (FAA/AED APPROVED); WEIGHTS ARE ACTUALS





Dillon Aero MCAS-MH developed for the MD530/AH-6M

- Lightweight
- Fully qualified and tested
- Provisions for accessories
- 300 flight hour inspection interval
- Can remove/install Goliath® Tank
- Interfaces with existing ICE Tank
- Designed by SOF aviation users
- Field maintainable/repairable
- Stow-able for easy transportability
- Complete airframe interchangeability
- Clean/efficient design for ease of operation
- External Personnel System 1,000 lb. rating

# MCAS - 500 GUNSIGHT SYSTEM

## GUNSIGHT SYSTEM OVERVIEW



Flexible gunsight mount provides wide range of vertical, lateral, elevation, and azimuth adjustments

Gunsight mount is keyed to replaceable aluminum rub block

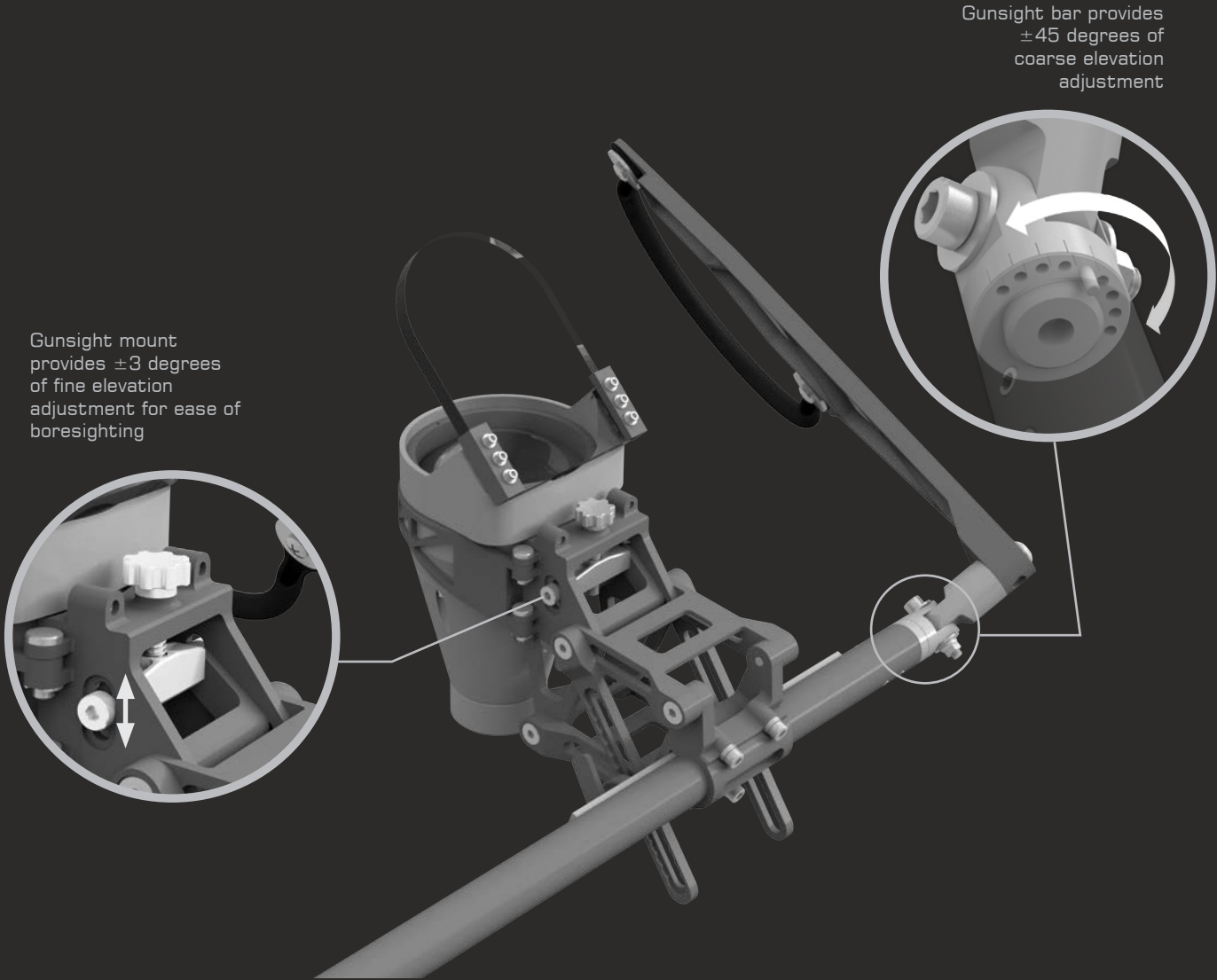


x1 Gunsight Bar  
x2 Gunsight Mounts

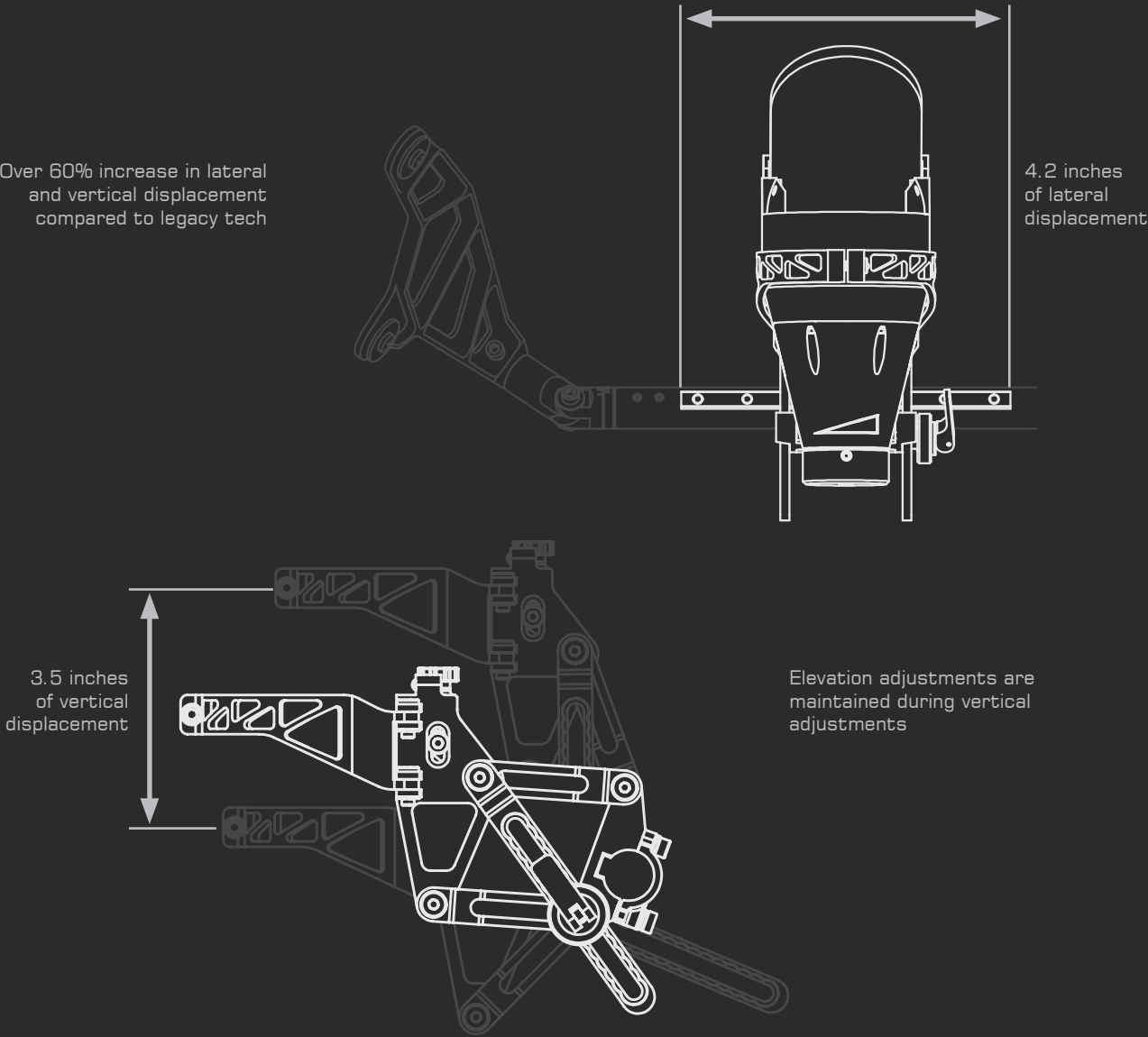
Total Weight: 3.0 lbs



ELEVATION ADJUSTMENTS



LATERAL AND VERTICAL ADJUSTMENTS







## INNOVATION AT DILLON

The Dillon M134, more commonly referred to as the 'Minigun' was accepted into service with the US Army in 2003. It was designated the M134D, replacing the earlier GAU-2C as the standard type. As a result of the success of this weapon system, Dillon Aero has been awarded over 375 major contracts by the US government, in addition to numerous other significant projects.

Our products are found on land, in the air, and at sea. Since its establishment, Dillon Aero has fielded more than 6,000 weapons systems in more than 30 countries. Since 2000, Dillon's product line has grown to include high-capacity feed systems for the M134D as well as the M240, M60, PKM, .50 Cal Heavy Machine Gun, and MK19 Grenade Launcher; a wide range of helicopter, naval, and vehicle weapon mounts; and a complete line of safety and support equipment for the Minigun. Our products are superior in their cutting-edge design, as evidenced by their reliability and ease of use.

The quality of Dillon products are matched by the quality of its service. We have created a worldwide support network to include three mobile training and maintenance groups to better assist our customers. Besides this, Dillon maintains substantial reserves of inventory at all times, rather than waiting to manufacture a part post-order. We feel this is commonsense strategy for effective customer service.

With decades of history and proven performance behind us, Dillon remains committed to building and maintaining the best. Our name is our reputation.

**DILLON AERO, INC.**



**DILLON AERO, INC.**

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