# MILITARY SYSTEMS GROUP

## **BECAUSE LIVES DEPEND ON IT**

A31

# PRODUCT CATALOG



## **BECAUSE LIVES DEPEND ON IT**

Military Systems Group is one of world's most widely used designer and producer of military machine gun mounting systems, Gunner Protection Kits (GPK) and Turrets. Since 1977, governments and units around the world have depended on MSG's products because we design and build them knowing that lives depend on them.

## WHAT WE DO

MSG designs, integrates, and manufactures weapons mounts for a wide variety of weapons and ground vehicles, aircraft and maritime craft.

## 2022 Product Catalog

AS9100 CERTIFIED **GSA GS-07F-5960R** DUNS 62734704 **ISO 9001 CAGE ODDWS MADE IN USA ITAR REGISTERED** NIST800.171 FFL Type 10 SDVOSE and CMMC Rated

## WHAT SETS US APART

Our People. We served. We know the challenges firsthand

Mission Focus. We quickly turn complex challenges into innovative material solutions that work in the field.

Combat Tested. Four decades of fielded product experience under the most difficult conditions.

Innovation. We know that what worked yesterday is not good enough for tomorrow.

Vertical Integration. We solve problems and produce final products in-house. Under one roof, we have engineers, R&D and production manufacturing, supply-chain managers and quality systems.

ready to produce.

Quality. We operate within the AS9100 and ISO 9001 quality management system.

Large Format Fabrication. MSG leverages its sister company for large fabrication and contract manufacturing requirements. See page 78.

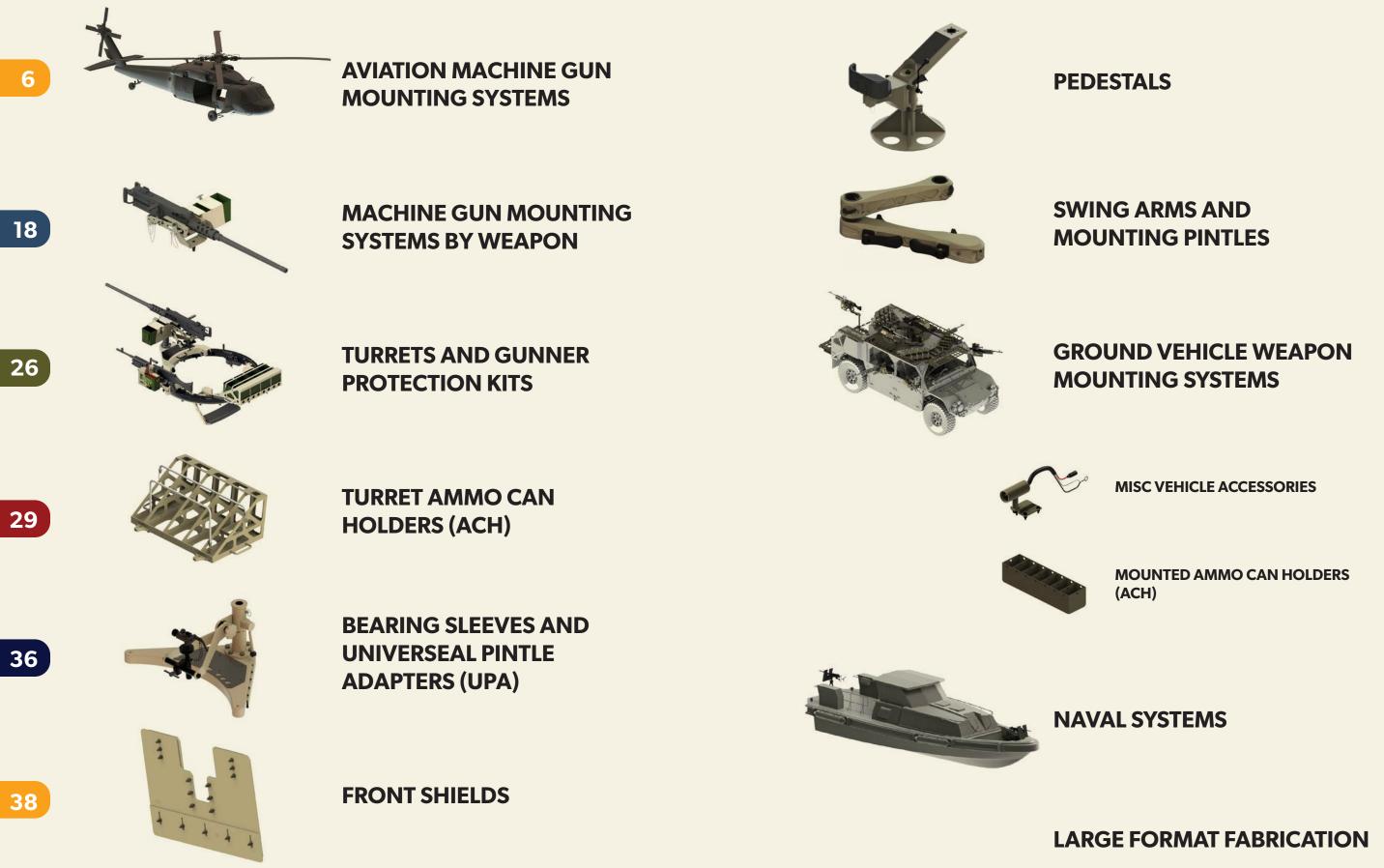
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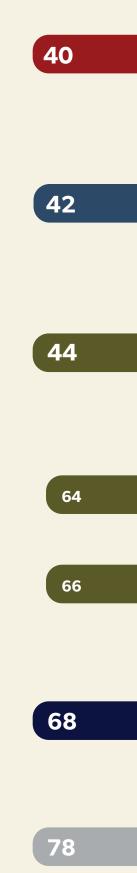
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Proprietary Products. We have hundreds of our own designs

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## **40 YEARS EXPERIENCE**

Military Systems Group has designed and manufactured machine gun mounts for over 40 years. Our expertise centers around our understanding of the holistic requirement when weaponizing an aircraft – from custom catchbag sizes, custom field of fire stops, understanding the weapon mount ergonomics, all come together to create and field a combat effective product for your aircraft.

## RESOURCES

**Qualification and Certification** 

MSG partners to provide M airworthiness certification.

Engineering

Our team of engineers clean-design or modify fielded products for new applications.

MSG has 3D scan capabilities, enabling us to integrate mounts into unique applications.

MIL-STD-1290 compliant, aircraft specific conformal field of fire mapping.

## Weapon OEM relationships

MSG has close relationships with many weapon OEMs, allowing us to design weapon mounts that work seamlessly with the weapon.

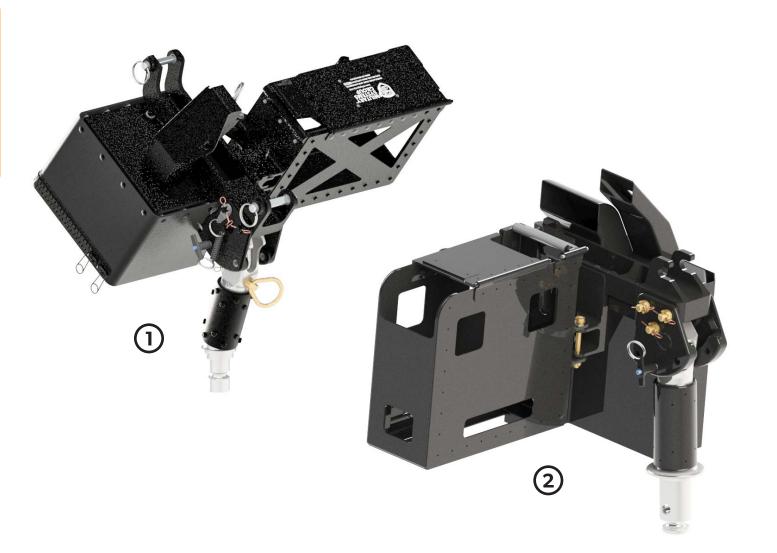
## Aircraft OEM relationships

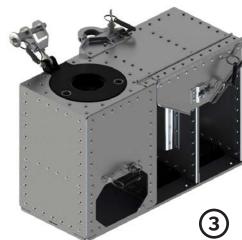
MSG has relationships with many aircraft OEMs, allowing us to gather interface information, aircraft data, and ensure our mounts interface safely with the aircraft.

MSG partners to provide MIL-STD testing, STC certification, and

## **AVIATION MACHINE GUN MOUNT COMPONENTS**

## **AVIATION MACHINE GUN MOUNT COMPONENTS**









### **Aviation Machine Gun Mount Components**

1. Aviation M240 Mount Features and Benefits	MAS-214
Custom Field-of-Fire	
<ul> <li>Catch Bag Options (See adjacent page)</li> </ul>	
Lock Plates	
<ul> <li>Stow Positions; 0°, 90°</li> </ul>	
Folding ACH	
Weight	
• 14.6 lbs.	
2. Aviation PKM Mount Features and Benefits	MAS-145

- Custom Field-of-Fire
- Catch Bag Options (See adjacent page)
- Lock Plates
- Stow Positions; 0°, 90°
- Folding ACH
- Weight
- 13.8 lbs.

### 3. Aviation Base Assembly With spare barrel holder 4. Aviation Pedestal Base **Assembly Pedestal** 5. Double Swing Arm 6. Single Swing Arm 7. Legacy Swing Arm 8. Standard Catch Bag 9. Black Hawk Catch Bag

MAS-14	MAS-111 44
	MAS-107
l	MAS-110
	MAS-115
	70751-02018-001/002
l	MAS-114-051
	MAS-114-032

## **NEXT GENERATION M240 MACHINE GUN MOUNTING SYSTEM**

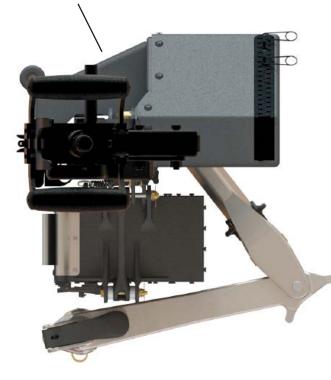
MAS-401

## H-60/S70 M240 MACHINE GUN MOUNTING SYSTEM





**COMPACT POSITION - TOP VIEW** 



### Next Generation M240 Machine Gun Mounting System

### Next Generation M240 Machine Gun Mounting System

Features and Benefits

- Lightest aviation M240 window mount system in MSG history
- Future-proofed for 6.8mm and .338 caliber next generation weapons
- Small inboard stow footprint
- Improved swing arm design eliminates "slop" when locked for firing
- Catchbag optimized for firing in depression
- Toolless installation and removal
- Designed for firing in extended depression for firing past -90  $^\circ$







### H-60/S70 M240 Machine Gun Mounting System

Machine Gun Mount	MAS
Swing Arm	707
Features and Benefits	

- Drop in, Sikorsky Certified M240 Machine Gun Mount for S70i, S70B and UH60
- Field-of-fire can be modified based on external stores or equipment
- Stow locations can be modified
- Capable of supporting M240 with 24.8" barrel and up to 10" suppressor





AS-214 751-02018

## SINGLE SWING ARM M240 MACHINE GUN MOUNTING SYSTEM

## CH148 CYCLONE M240 MACHINE GUN MOUNTING SYSTEM

**AVIATION MOUNTS** 



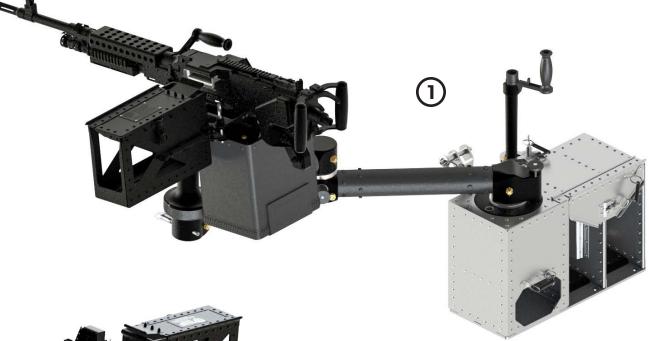


SINGLE SWING ARM M240 MACHINE GUN MOUNTING SYSTEM

Features and Benefits

• Left and right, floor-mounted systems

- Mounting base stores two 200rd 7.62 NATO Ammunition Cans
- Mounting base can incorporate a spare barrel holder
- Small inboard stow footprint
- Field-of-Fire stops are built into the system per aircraft requirements





### CH148 CYCLONE M240 MACHINE GUN MOUNTING SYSTEM

- 1. Canadian Maritime Helicopter Program (CHMP) Door Mount
- 2. Canadian Maritime Helicopter Program (CMHP) Ramp Mount

Note: Baseplate easily modified for use in other aircraft

**MAS-104** MAS-103

## M134 MINIGUN MOUNT SYSTEMS

## M134 MINIGUN MOUNT SYSTEMS



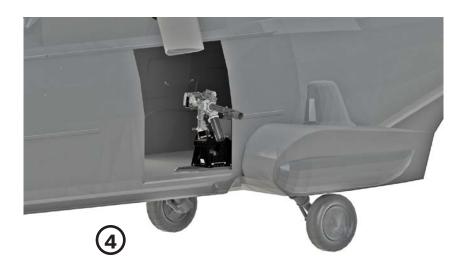


### 1. Aerial Universal M134 Door-Ramp Machine Gun Mounting System MAS-302

- Features and Benefits
- Stow the weapon vertically over the mount, minimizing cabin intrusion
- Integrated batter and ammunition can reduces system footprint
- Stand alone system, minimal aircraft integration required
- Ready-stow, allows operators to prepare the weapon for firing prior to opening the cabin door
- 2. Mi17 with Minigun Mounted
- 3. H-60/S70 with Minigun Mounted
- 4. EC725/H225M/AS332 with Minigun Mounted







**Mi17** 



H60/S70

EC725 H225M AS332



# **MACHINE GUN MOUNTS ORGANIZED BY WEAPON**



M2/M2HB/M3/MK19 Page 20



MG3 Page 21



**PKM** Page 22



M134 Page 23



NSV Page 23



## M240/M249/MK48 Page 20

MOUNTS



Page 21



DShK Page 23

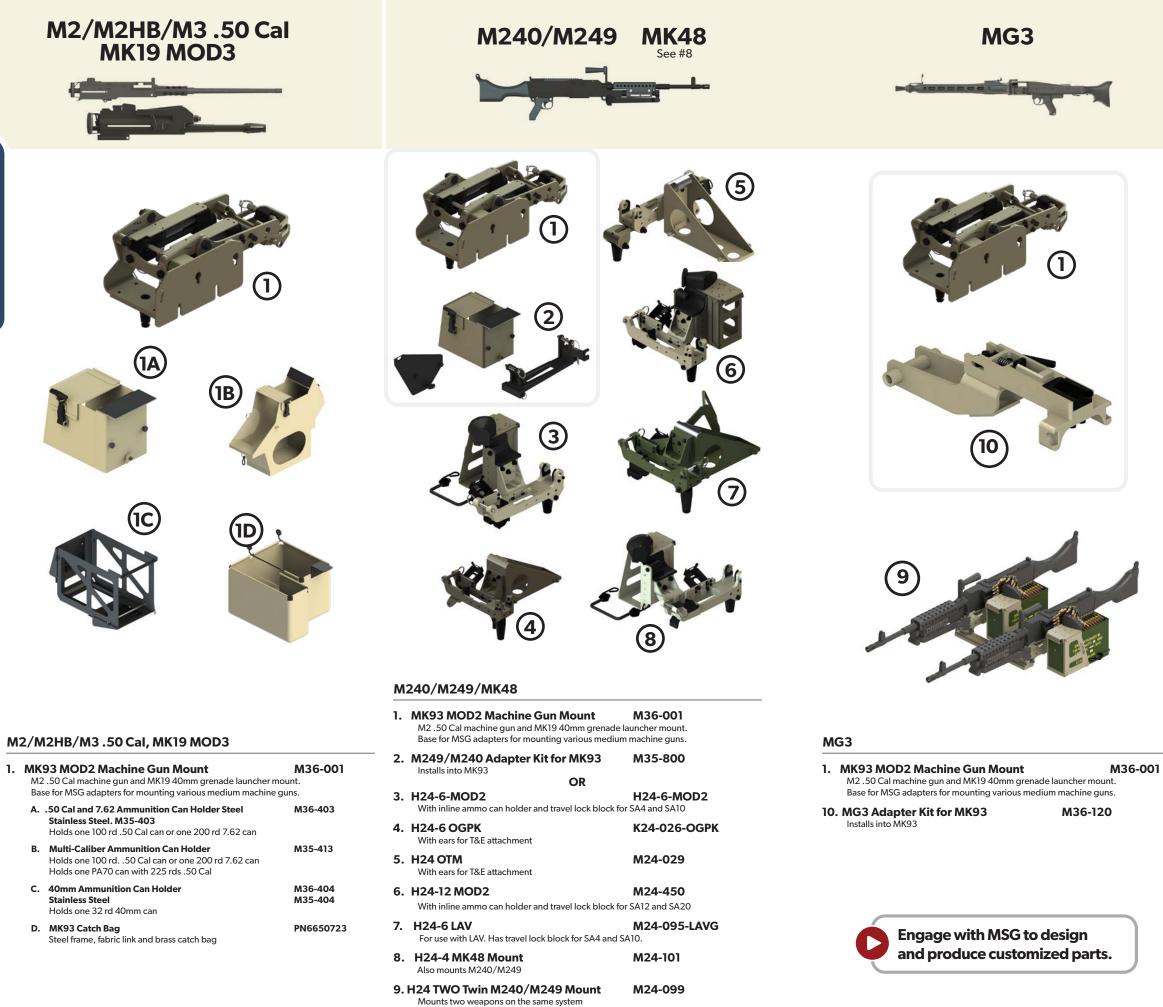


**MK19 MOD3** Page 20



M230LF/XM914 Page 24

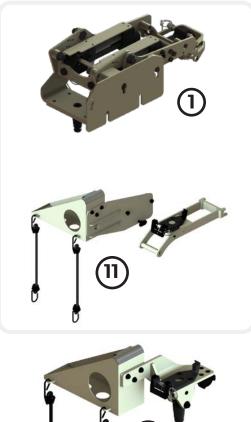




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M60/MK43





### M60/MK43

1.	MK93 MOD2 Machine Gun Mount M2 .50 Cal machine gun and MK19 40mm grenade launch Base for MSG adapters for mounting various medium mach	
11.	. M60 Adapter Kit for MK93 Installs into MK93	M25-805
	OR	

12. H60-6 Machine Gun Mount

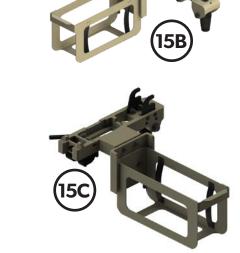
M25-800

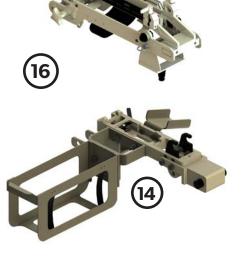
MOUNTS











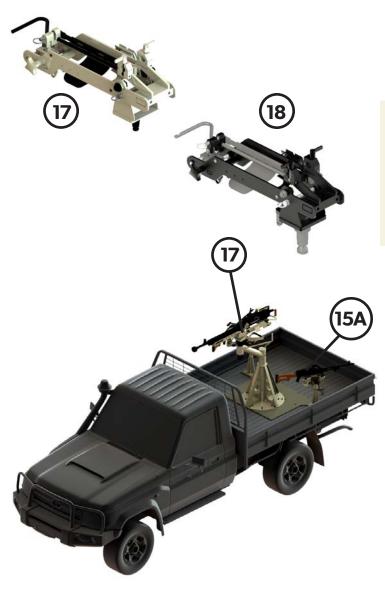


1. MK93 MOD2 Machine Gun Mount M2 .50 Cal machine gun and MK19 40mm grenade launcher n Base for MSG adapters for mounting various medium machine	
13. PKM Adapter Kit for MK93 Installs into MK93	M38-100
OR	
17. DShK Machine Gun Mount for NATO Pintle	M37-104
14. PKM Adapter Kit for DShK Installs into DShK Machine Gun Mount	M38-240



15.	PKM	Mounts	

Α.	PKM-12 for use with SA12/SA20	M38-212
В.	PKM-10 for use with SA10	M38-210
C.	PKM OTM for use with T&E	M38-211
16.PK	M-7	M38-700
For	use with SA7	



### DShK

17. DShK Machine Gun Mount for NATO Pintle M37-104 M37-105

18. DShK Machine Gun Mount with Naval Pintle Made with non-corrosive materials

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M134

See Turrets Pg 30

See Aviation Pg 16

MOUNTS





NSV

**19. NSV Mount** For 12.7mm NSV machine gun

M36-350

## M230LF/XM914



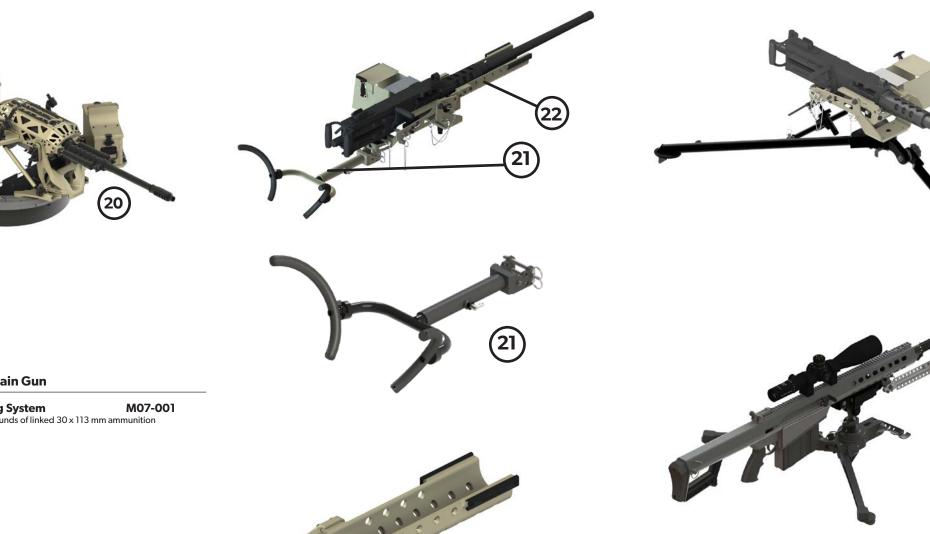
## **MK93** Accessories

Mount Directly to MK93

## **GROUND TRIPODS AND BARRETT SHOOTER REST**

(24)





### M230LF/XM914 30mm Chain Gun

20. M230LF/XM914 Mounting System M07-0 Each ammunition can holds 100 rounds of linked 30 x 113 mm ammunition



### **Ground Tripods and Barrett Shooter Rests**

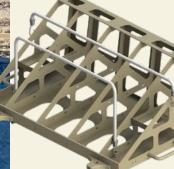
- 23. Lightweight Tripod for Heavy Machine Guns MK123 Heavy machine guns mount into the tripod. Accepts the MSG Barrett Shooter Rest.
- 24. Lightweight Tripod TLW-100 For use with medium and light machine guns. Can be used for Barrett .50 Cal M82 or M107 rifles when using the MSG Barrett Shooter Rest.

### MK93 Accessories

- 21. MK93 Dual Shoulder Rest M36-090 Provides significantly improved control and accuracy. Attaches to the MK93. Installation requires no tools.
- M36-900 22. MK93 Tri-Rail Light Bracket Three Picatinny rails for attaching optics. Does not interfere with quick change barrel.



# TURRES ACUNIER PROTECTION KITS





Standard NATO 42" Turret Series and Accessories

Page 28



Large Diameter 46" Turret Series and Accessories

Page 30

Gunner Protection Kits (GPK)

Page 32



**Turret & GPK Accessories** 

Page 34

## **STANDARD NATO TURRETS 42" SERIES**

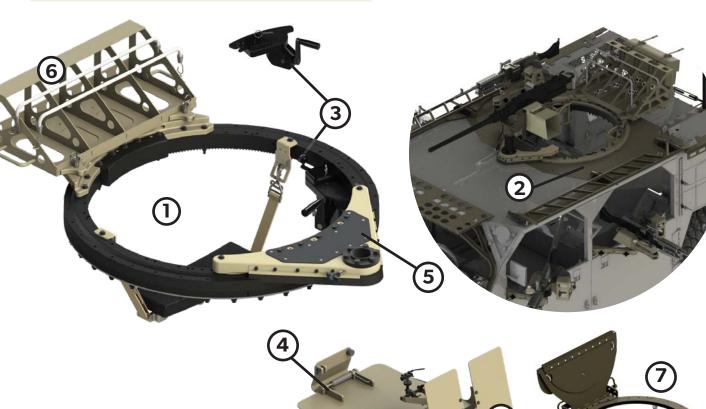
## **OPTIONS FOR STANDARD NATO TURRETS 42"**

## MSG Standard NATO 42" Series Turret Configuration. TUR1251

MSG Turrets can be configured to install on nearly any vehicle, carry nearly any weapon, and haul nearly any ammunition.

- 360 degree 42" Turret
- Holds 4 50 Cal Ammo Boxes (100 rounds each) (MG and Ammo Carrying options Pg 34)
- Fixed A-Frame
- Quick Release Sling Seat
- Manual Traversing Mechanism
- Also Pictured
- M2/MK19 Mounting system (MG mounting options Pg 18) Secondary Weapon Station





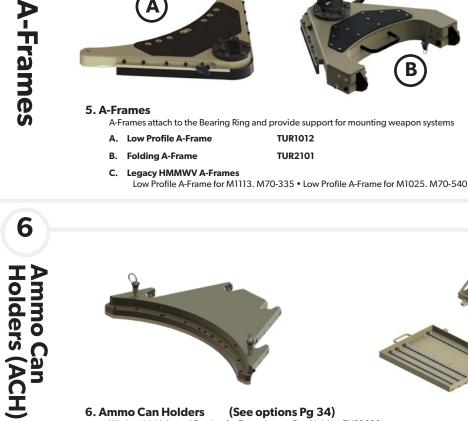
### **Standard NATO 42" Series Turrets**

1. Turret Assembly With Fixed A-Frame and 4-Bay ACH	TUR1251
2. MSG GMV 1.1 Turret Assembly	<b>TUR2100</b>
Folding A-Frame, Secondary Weapon Station, Armor Plate and 3	+2 Bay ACH
3. Manual Traversing Mechanism Geared for easy turning	TUR2130
<b>4. 42" Turret Hatch</b>	TUR1098
Watertight. Locks in the open position. Latches shut from the insid	de.



8

Next Page Next Page TUR2399 Page 22



Α

5

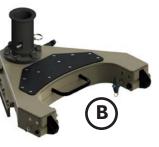
6. Ammo Can Holders (See options Pg 34) Works with Universal Bracket for Turret Ammo Can Holders TUR2090. Various configurations for multiple cans of 50 Cal, 7.62x51, 12.7mm, 40mm, and more.



# **Bearing Sleeves and Mounts for A-Frames**

**Bearing Sleeves and UPAs** (See Options Pg 20)

**Machine Gun Mounts** (See Options Pg 18)





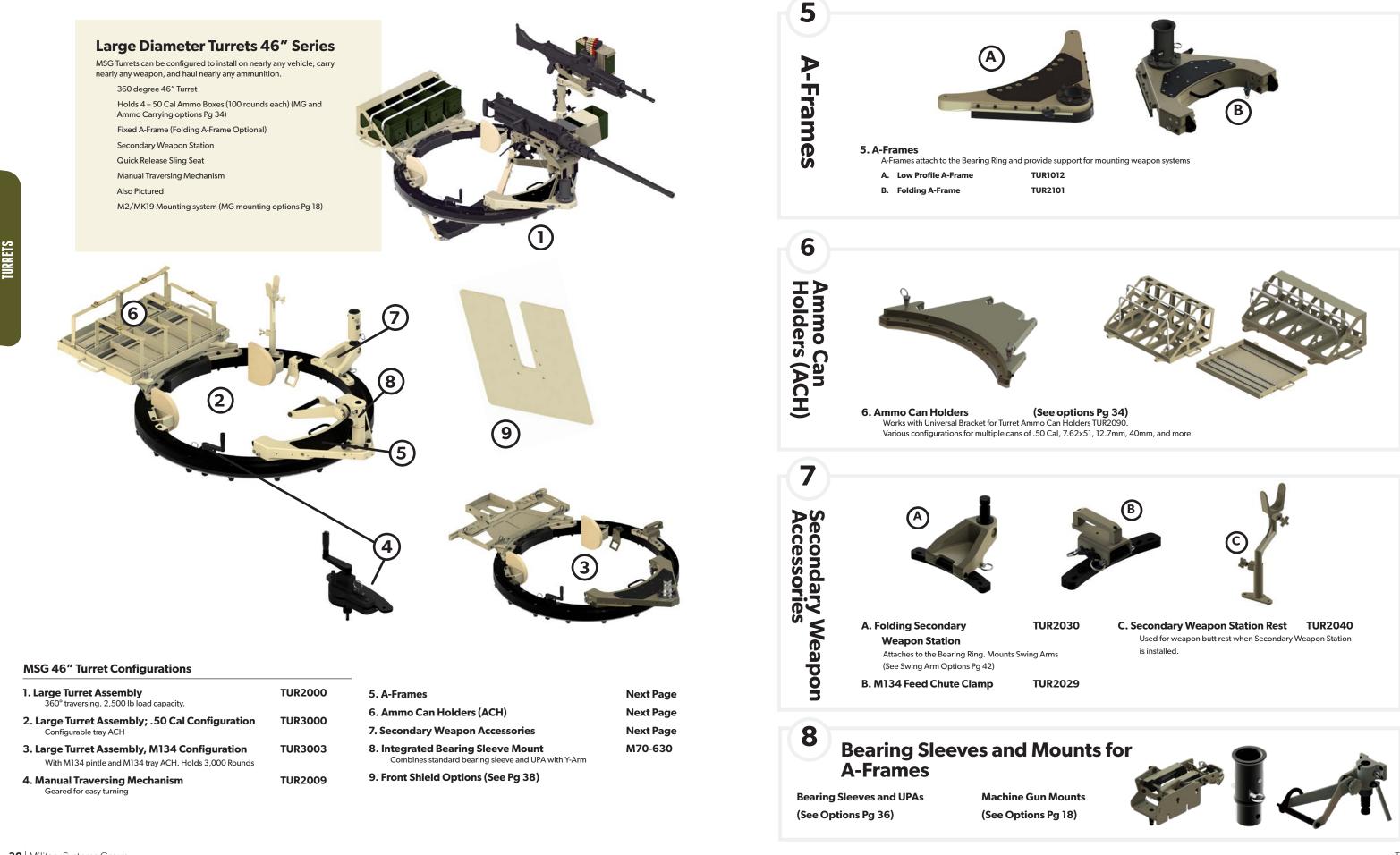






## **TURRETS 46" SERIES**

## **TURRETS 46" SERIES**



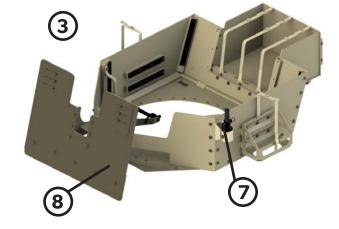
## **GUNNER PROTECTION KITS**

## **GUNNER PROTECTION KITS**





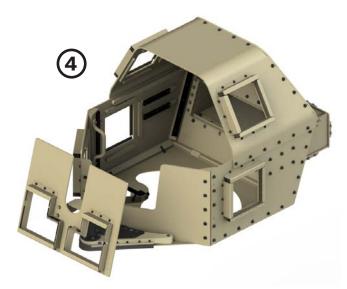
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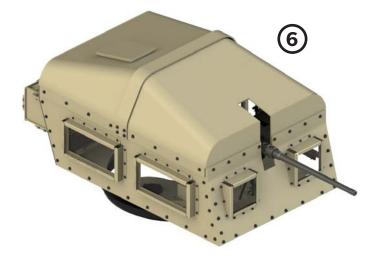


### MSG Standard NATO 42" Turret Series GPK Configuration

<ol> <li>Heavy System Gunner Protection Kit         Designed for fixed critical infrastructure security sites and for inst resistant enclosures. M134 mounting and ammunition handling s environmental canopy assembly is standard.     </li> </ol>	
2. Objective Gunner Protection Kit CCDC Designed. Overhead Protection	OGPK 2.0
3. GMV 1.1 Gunner Protection Kit MSG's USSOCOM Standard GPK. 16" high	TUR2401

4. Gunner Protection Kit with Overhead Protection MSG OGPK. 21" side walls. Overhead protection	TUR2700
5. Gunner Protection Kit MSG GPK. 21" side walls. Overhead protection	TUR2701
6. Fully Enclosed Gunner Protection Kit	TUR2771
7. Auxiliary Weapon Station	Next Page
8. Front Shields	Next Page
9. Bearing Sleeves and Mounts for A-Frames	Next Page













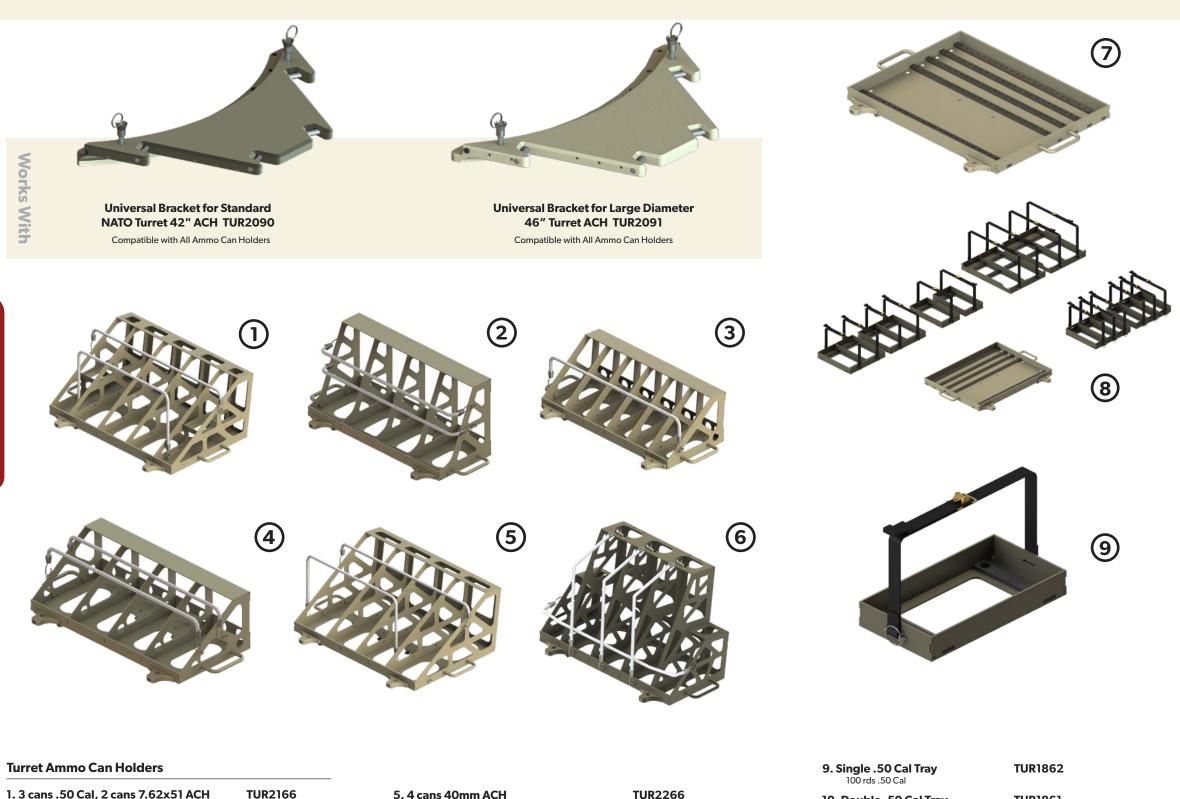


(See Options Pg 36) **Machine Gun Mounts** (See Options Pg 18)



## **TURRET AMMO CAN HOLDERS (ACH)**

## TURRET AMMO CAN HOLDERS (ACH)



<b>1. 3 cans .50 Cal, 2 cans 7.62x51 ACH</b> 300 rds .50 Cal, 400 rds 7.62x51	TUR2166
2. 4 cans.50 Cal Vertical ACH 800 rds .50 Cal	TUR1157
<b>3. 6 cans 7.62x51 ACH</b> 600 rds 7.62x51	TUR1156
4. 4 cans .50 Cal ACH 400 rds .50 Cal	TUR2062

<b>5. 4 cans 40mm ACH</b> 128 rds 40mm	TUR2266
6. 3 cans .50 Cal, 2 cans 7.62x51 Vertical ACH 600 rds .50 Cal, 400 rds 7.62x51	TUR2366
7. ACH Tray Mounting Base Base tray for holding customized sets of ACH trays	TUR1860
8. ACH Tray Kit with Mounting Base Mission Configurable. Mix and Match	TUR1855
6 ea50 Cal Can Trays. 600 rds .50 Cal 6 ea. 7.62x51 Can Trays. 600 rds 7.62x51	

4 ea. 40mm Can Trays. 128 rds 40mm

9. Single .50 Cal Tray 100 rds .50 Cal	TUR1862
<b>10. Double .50 Cal Tray</b> 200 rds .50 Cal	TUR1861
11. Double 40mm Tray 64 rds 40mm	TUR1865
12. Triple 7.62x51 Tray 600 rds 7.62x51	TUR1863
<b>13. ACH for M134 Magazine</b> 3,000 rds 7.62x51	TUR2072









## **BEARING SLEEVES AND UPAS**

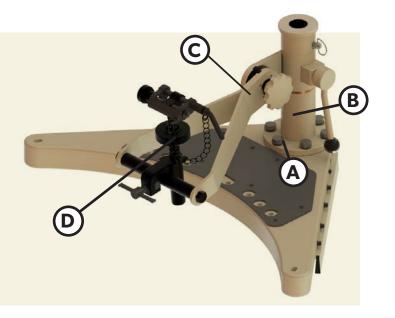
## **BEARING SLEEVES AND UPAS**

### **Bearing Sleeve to Mount Components**

A. Attachment Point to A-Frame These Parts bolt into the A-Frame and accept Bearing

Sleeves as the base for machine gun mounting systems.

- **B. Bearing Sleeves** Bearing Sleeves and extensions are the interface between the A-Frame and UPA.
- C. Universal Pintle Adapter (UPA) The UPA installs into the bearing sleeve. The top accepts the gun mount pintle. Can include Y-Arms for attaching a T&E. Can Include a bracket for attaching front-shield mounting brackets.
- D. Traverse and Elevation Mechanism (T&E) Controls left and right and up and down movement of the machine gun, facilitating precision fire on target. Attaches to UPA and MK93 or OTM mount.

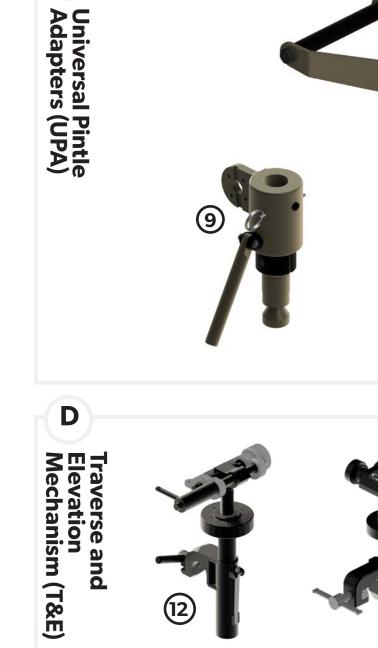




### **Bearing Sleeves and M134 Pintles**

1. A-Frame Socket Bolts into A-Frame. Accepts all Bearing Sleeves	TUR1013
2. M134 Pintle A-Frame Flanged Bolts into A-Frame. Accepts M134 vertical arm	M70-628
3. M134 Pintle A-Frame Socket Pins into A-Frame socket. Accepts M134 vertical arm	M70-629
4. Bearing Sleeve Assembly for Folding A-Frame Pins into A-Frame socket. Accepts UPA	TUR1077
5. Standard Bearing Sleeve Pins into A-Frame socket. Accepts UPA	M70-299
6. Bearing Sleeve Extension Pins into A-Frame socket. Accepts Bearing Sleeve	M70-307
7. Short Bearing Sleeve Pins into A-Frame socket. Accepts UPA	M70-617

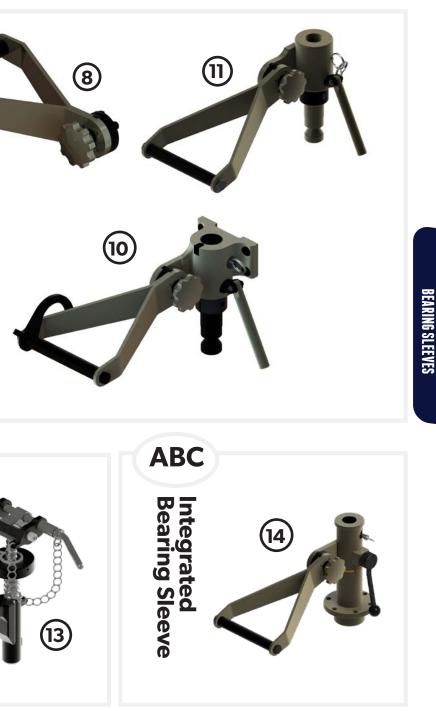




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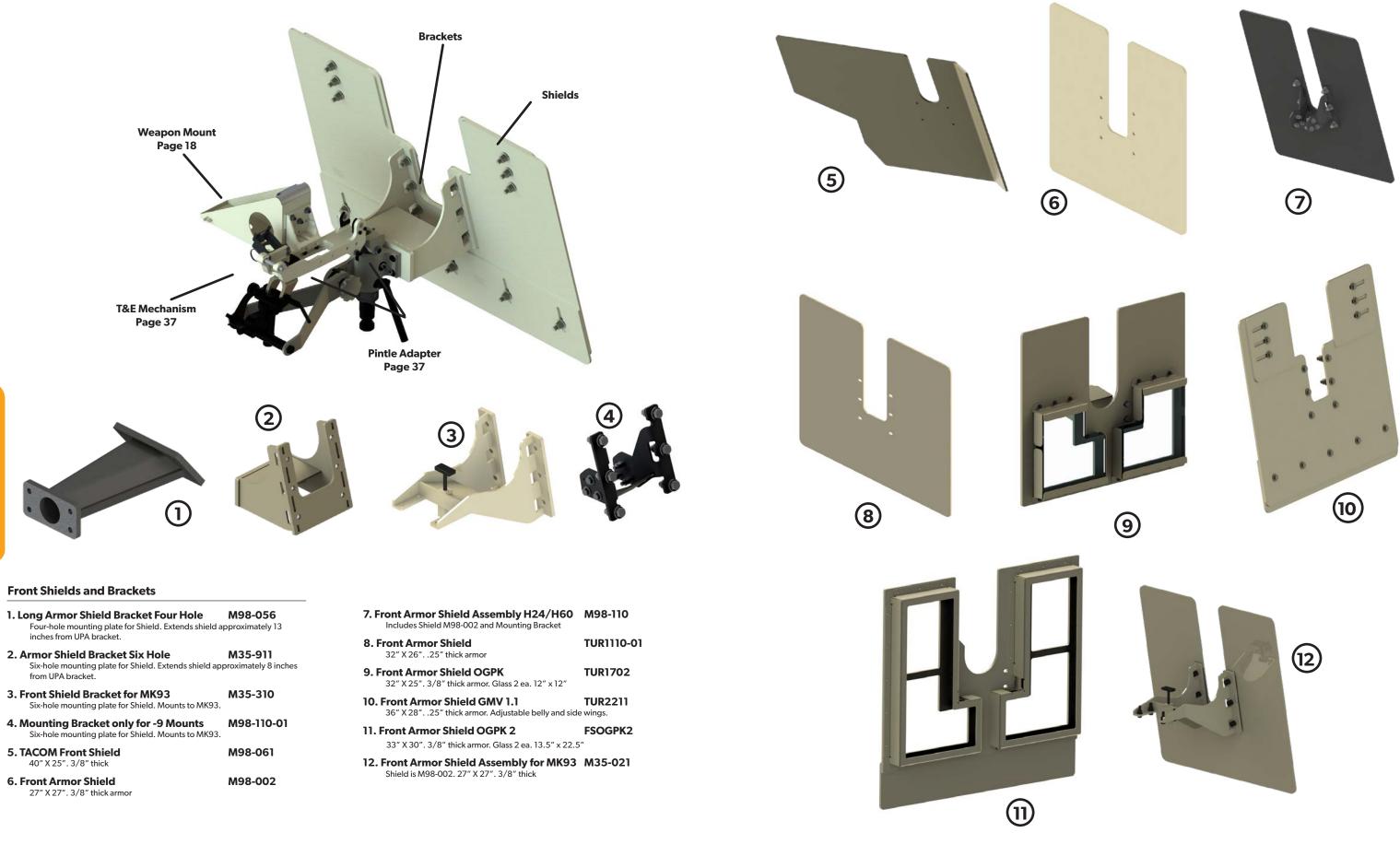
**Universal Pintle Adapters and T&Es** 

8. UPA Adjustable Arm Assembly Y-Arm for attaching T&E to the UPA	K98-010
9. USG UPA without Y-Arm	PN12012062
10. UPA Forged Body Includes Y-Arm and bracket for front-shield mou	M98-200 Inting brackets
11. UPA Includes Y-Arm	M98-011



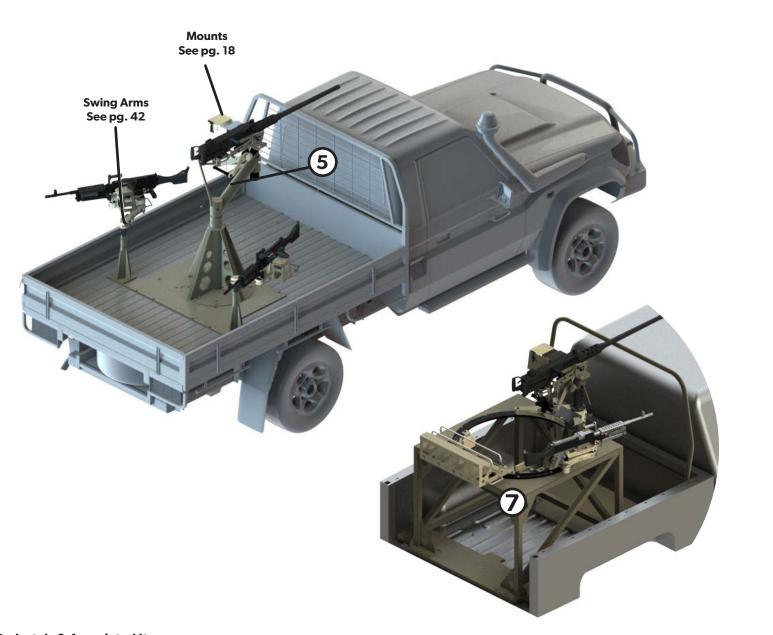
- 12. USG Traverse and Elevation Mechanism (T&E) 7791119 Controls left and right and up and down movement of the machine gun, facilitating precision fire on target. Attaches to UPA and MK93.
- 13. MSG Traverse and Elevation Mechanism (T&E) M98-012 Controls left and right and up and down movement of the machine gun, facilitating precision fire on target. Attaches to UPA and MK93.
- 14. Integrated Bearing Sleeve and UPA M70-630 Combines all parts from attaching to A-Frame to accepting machine gun mount pintle

## **FRONT SHIELD BRACKETS**



## **FRONT SHIELDS**

## **PEDESTALS**



### **Pedestals & Associated Items**

- 1. Pedestal Offset Pintle (POP) M14-001 Seated Gun Mount for Light and Heavy Machine Guns. Turns 360°. Installs between wheels in cargo bed of nearly any vehicle including boats. Made from stainless steel base for maritime use, otherwise made from carbon steel. Options include low or high seat back and standard or tall base.
- 2. Adjustable-Height Offset Pedestal M03-225 Pedestal Gun Mount for Light and Heavy Machine Guns. Turns 360°. UPA can be adjusted to different heights. Installs between wheels in cargo bed of nearly any vehicle including boats.
- 3. Adjustable-Height Pedestal M03-350 Pedestal Gun Mount for Light and Heavy Machine Guns. Turns 180°. Can be adjusted to different heights. Installs behind cab in cargo bed of nearly any vehicle including boats.
- 4. MK16 MOD9 Tripod Assembly M03-600 Pedestal Gun Mount for Light and Heavy Machine Guns. Turns 360°. Installs in cargo bed of nearly any vehicle including boats.

### 5. Tactical Weapon Mounting Station

### Pedestal Bed Assembly

M03-224 Pedestal Gun Mount for Light and Heavy Machine Guns. Turns 360°. UPA can be adjusted to different heights. Installs in cargo bed of nearly any vehicle including boats. Accommodates Swing Arm Mounting Pintles.

- 6. MK16 MOD8 Tripod Assembly M03-602 Mounts Heavy Machine Guns. Adjustable train stops to limit fields-of-fire.
- 7. MSG 42" Series Turret and Stand for Bed of **TUR4008** non-Standard Vehicle
  - The 42" Series Turret mounts into the frame and secures into baseplates in the bed of a

non-standard vehicle. Includes a scarf rail to prevent the gunner from shooting the cab of the vehicle.





## **PEDESTALS**

## **SWING ARMS**

## **SWING ARM MOUNTING BRACKETS AND PINTLES**





### Swing Arms

### SA20-001

SA11-001

1. SA20 Swing Arm The SA20 incorporates MSG's latest innovations and improvements for extended durability and easier operation.

A. Compatible with all existing MSG swing arm mounting brackets

- B. New large cam levers make it easier to engage and disengage tension even while wearing gloves
- C. Can be completely disassembled/assembled with only a multi-tool

2. SA12 Swing Arm	SA12-013
The SA12 Swing is 15% lighter than the SA10 and provides smooth	ther movement

### 3. SA11 Swing Arm

**SWING ARMS** 

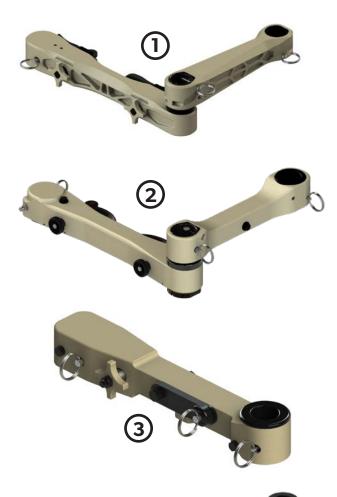
The SA11 Swing Arm can accommodate weapons up to 7.62mm and is intended for applications where a double arm is not needed. For use with H24-6, PKM-6, and H60-6 Machine Gun Mounts.

4. SA10 Swing Arm				SA10	-01
The SA10 Swing Arm is a double-ar	ticulating arm	that incorpora	ates	a trave	lock, f

ock, friction locks, and quick release pins. This combat-proven design supports light and medium Machine Guns and Mounts for vehicles, pedestals, and guard towers. It is used in conjunction with the H24-6 gun Mount.

5. SA7 Swing Arm	M11-001
The SA7 Swing Arm has a heavy-duty design, capa	ble of carrying the additional weight
of an armor shield. For use with H24-7 and PKM-7 M	Machine Gun Mounts.

6. SA4 Swing Arm	M10-001
SA4 LAV Configuration	LAV M10-001LAV









**Swing Arm Mounting Brackets** 

1. Adjustable-Height Pintle Adapter		M10-600
2. Flat-Base Mounting Bracket		M09-191
3. Adjustable-Height Flat Base Mounting Bracket		M03-702
4. Flat Base Socket Stand		M04-036
5. Example Vehicle Pillar Swing Arm Mounting Bracket		RZR-1040
(See Vehicle Pages for Options. Pg 44)		
6. Aft Tubes Attach to nearly any vertical surface	14″ 16″	M09-218 M09-029

7. 17" Pintle Posts	
A. Standard	M09-052
B. For SA7	M11-401
C. With Washer	M09-196
8. 19" Pintle Post	M09-028
9. 28" Pintle Post	M09-195
10. 32" Pintle Post	M09-051

SWING ARMS



# **VEHICLE WEAPON MOUNTING SYSTEMS**



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**LC79** Page 51



HMMWV Page 54



**TRUCK UNIVERSAL** Page 59



TOMCAR & HAVOC Page 60



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**DAGOR** Page 58

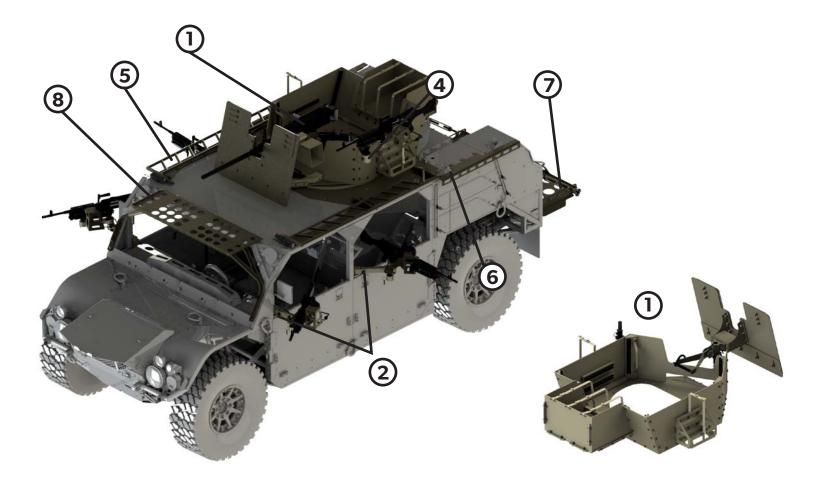


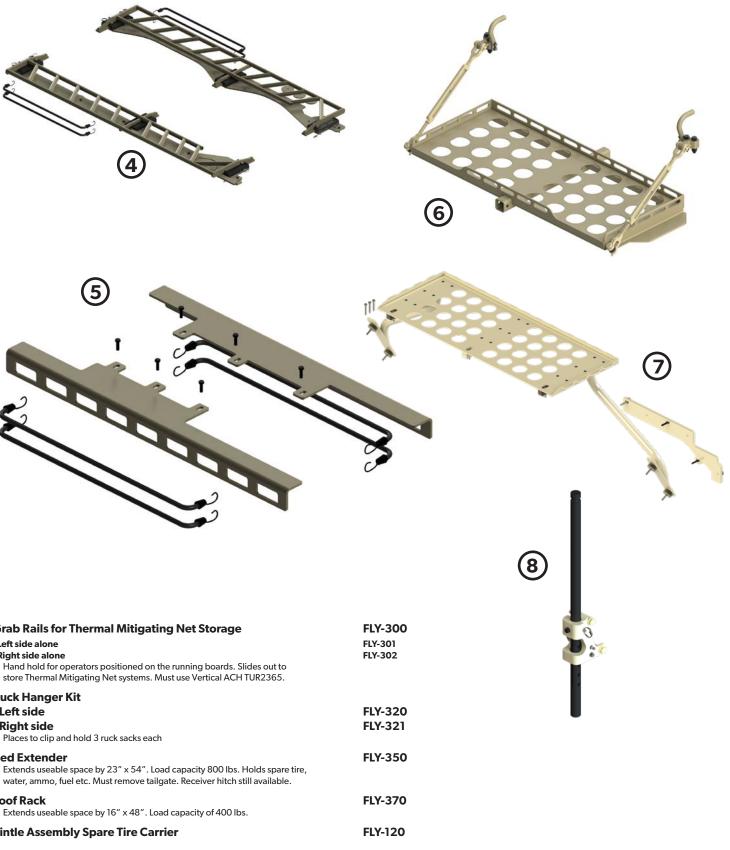
HIMARS and M270

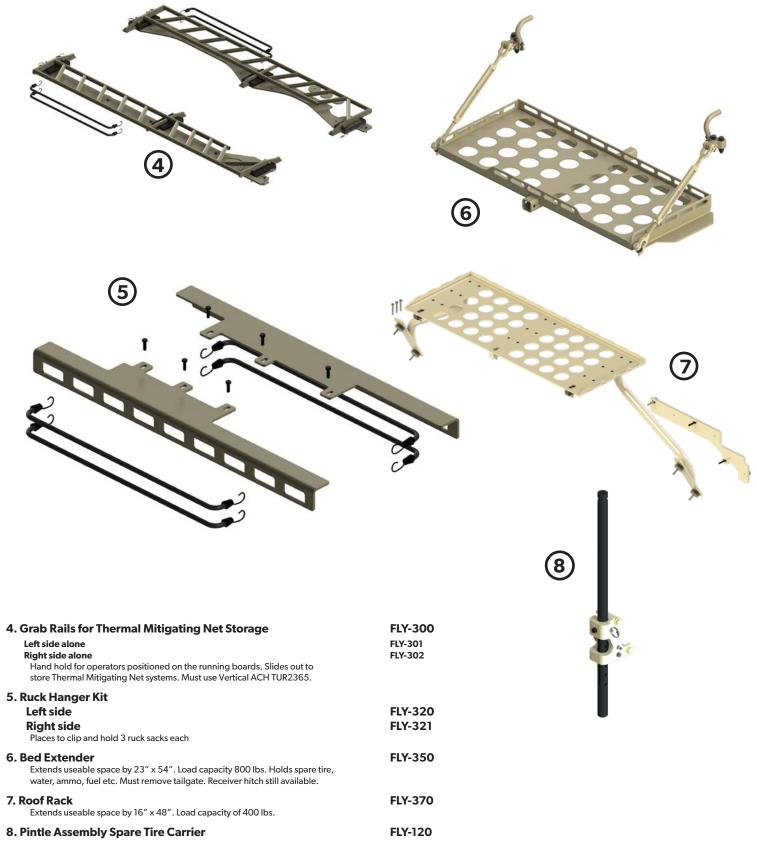
Page 59



## **GROUND MOBILITY VEHICLE (GMV) 1.1 (WITH GPK)**









TUR2100

### GMV 1.1

1. MSG Standard GMV 1.1 Turret Configuration	TUR2401
--	---------

•	360 degree 42" Turret (Turret Options Pg 28)
•	Back Holds (3) 50 Cal cans (100 rounds each)

- (MG and Ammo Carrying options Pg 34) • Side ammo can holders 200 rds 7.62x51
- 16-inch high armored walls

**VEHICLE MOUNTS** 

- Front Shield (Front Shield Options Pg 38)
- Secondary weapon station
- Manual Traversing Mechanism. (Powered Traversing Mechanism Option)
- M2/MK19 Mounting system (MG mounting options Pg 18)

2. Door Mounted Swing Arm bracket	FLY-145
3. GPK Auxiliary Weapon Station	TUR2405

## **BUILD YOUR MOUNT**



### 4. Grab Rails for Thermal Mitigating Net Storage

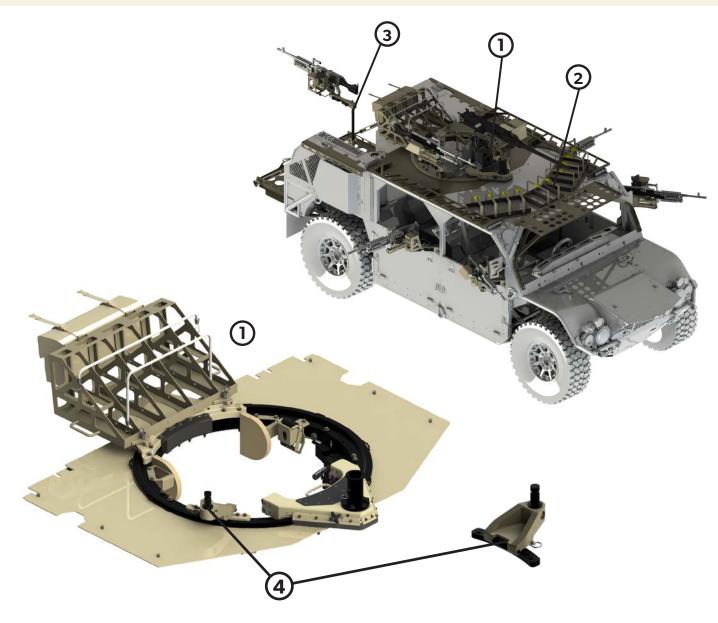
### 6. Bed Extender

### 7. Roof Rack



## **GMV 1.1**

## **GMV 1.1 (WITH TURRET)**



### GMV 1.1 with Turret

### 1. MSG GMV 1.1 42" Turret Configuration.

TUR2100

TUR2030

- 360 degree 42" Turret (Turret Options Pg 26)
- Armored Deck plate
- Turret Ammo Can Holder holds (3) 50 Cal cans (100 rounds each) and (2) 7.62x51 (200 rounds each) (MG and Ammo Carrying options Pg 34)
- Secondary weapon station
- Manual Traversing Mechanism. (Powered Traversing Mechanism Option)
- Front Shield Optional (Front Shield Options Pg 38)
- M2/MK19 Mounting system (MG mounting options Pg 18)

2. Roof Mounted 10-bay .50 Cal Ammunition Can Holder	FLY-200
Holds 10 cans of 100 rounds each .50 Cal ammunition	
3. Aft Tubes	
Attach to nearly any vertical surface. (Pintle Options Pg 36)	14″ M09-218
	16" M09-029

4. Folding Secondary Weapon Station



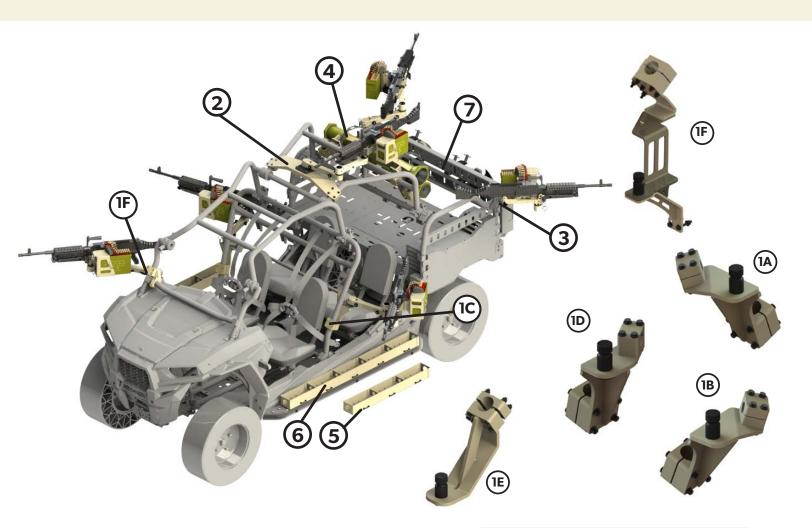


**VEHICLE MOUNTS** 

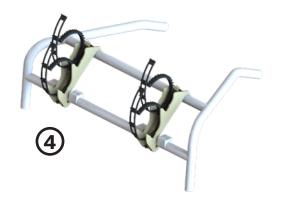
# MILITARY SYSTEMS GROUP

13

**MRZR** 







**BUILD YOUR MOUNT** 

**MRZR** Mounting

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Swing Arms

See Options Pg 42

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H24-12 MG Mount

See Options Pg 18

SA20

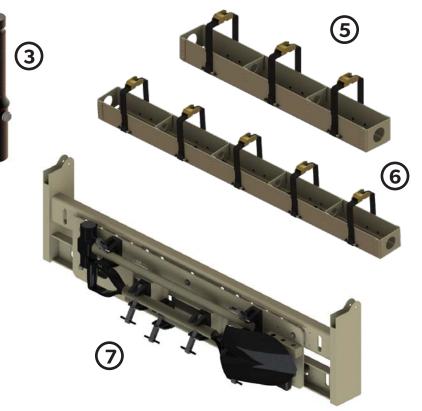
Bracket Swing Arm Pintles



### MRZR

1. Mounting Bracket Swing Arm Pintles			
A. B-Pillar Swing Arm Curbside Bracket Diesel	RZR-1040		
B. B-Pillar Swing Arm Roadside Bracket Diesel	RZR-1041		
C. B-Pillar Swing Arm Curbside Bracket Gas	RZR-050		
D. B-Pillar Swing Arm Roadside Bracket Gas	RZR-051		
E. A-Pillar Swing Arm Curbside Bracket Gas	RZR-025		
F. A-Pillar Swing Arm Curbside Bracket Diesel	RZR-1075		
2. ROPS Medium Machine Gun Mounting Bracket	RZR-1009		
3. C-Pillar Swing Arm Pintle Post	RZR-020		
4. MRZR AT4 Missile Rack Assembly Mounts two AT-4 Missile Launchers	RZR-015		
<b>5. MRZR 3-Bay Ammo Bin</b> Each Bay Holds 200 rds 5.56 or 7.62x51	RZR-038		
<b>6. MRZR 5-Bay Ammo Bin</b> Each Bay Holds 200 rds 5.56 or 7.62x51	RZR-041		
7. MRZR Pioneer Took Kit Includes Mounting Bracket with Axe, Shovel, Sledgehammer and	RZR1010 Mattock Pick		

## MRZR





4

### LC79

### 1. Pedestal Offset Pintle (POP)

Seated Gun Mount for Light and Heavy Machine Guns. Turns 360°. Installed between wheels in cargo bed of nearly any vehicle including boats. Made from stainless steel base for maritime use, otherwise made from carbon steel. Options include low or high seat back and standard or tall base.

2. Adjustable-Height Offset Pedestal M03-225 Pedestal Gun Mount for Light and Heavy Machine Guns. Turns 360°. UPA can be adjusted to different heights. Installs between wheels in cargo bed of nearly any vehicle including boats.

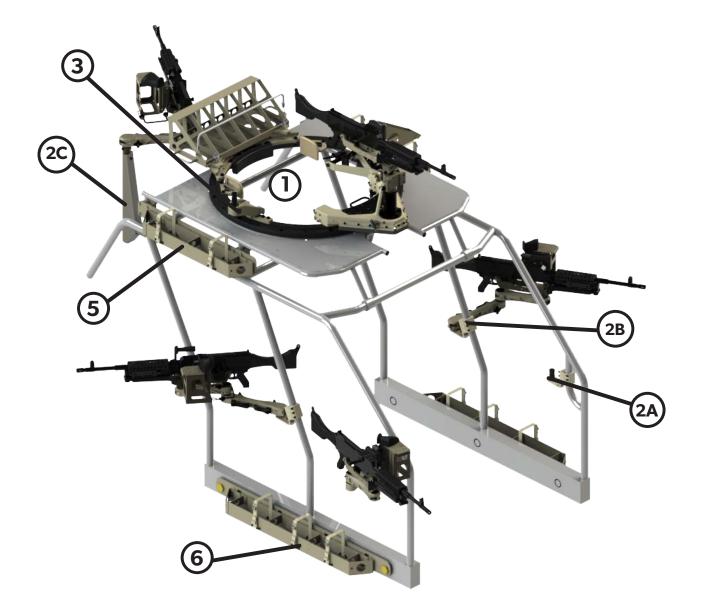
### 3. Adjustable-Height Pedestal

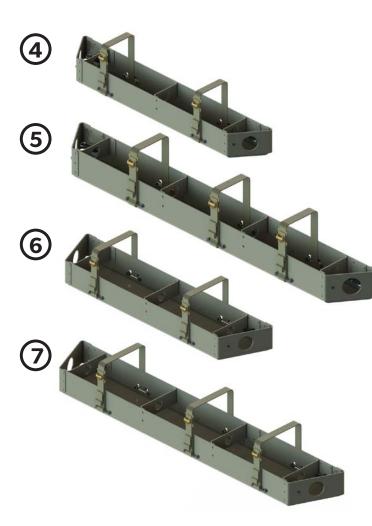
### M03-350 Pedestal Gun Mount for Light and Heavy Machine Guns. Turns 180°. Can be adjusted to different heights. Installs behind cab in cargo bed of nearly any vehicle including boats.

## 4. Tactical Weapon Mounting Station

## Pedestal Bed Assy M03-224 Pedestal Gun Mount for Light and Heavy Machine Guns. Turns 360°. UPA can be adjusted to different heights. Installs in cargo bed of nearly any vehicle including boats. Accommodates Swing Arm Mounting Pintles

## M14-001





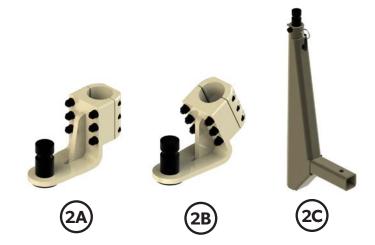
### SXV

**VEHICLE MOUNTS** 

1. MSG Standard SXV Turret Configuration Lightweight 360 degree Large Diameter 46" Turret (Turret Optio	<b>TUR1285</b> ons Pg 26)		
Holds (6) 7.62x51 cans (200 rounds each) (MG and Ammo Carryi	ing options Pg 34)		
Folding A-Frame. (A-Frame Options Pg 31)			
Secondary weapon station			
Manual Traversing Mechanism			
Also Pictured			
M240/M249 A-Frame Mounting system (MG mounting options Pg 18)			
2. Mounting Bracket Swing Arm Pintles			
A. A-Pillar swing arm bracket	SXV-001		
B. B-Pillar swing arm bracket	SXV-010		
C. C-Pillar swing arm curbside bracket	SXV-020		
3. Secondary Weapon Station	TUR2030		
4. SXV 2 Bay 7.62 Ammo Bin SXV-030 Use with Ammo Can Holder Bracket. Upper SXV-042. Lower SXV-043. Each Bay Holds 200 rds 5.56 or 7.62x51			

5. SXV 3 Bay 7.62 Ammo Bin Use with Ammo Can Holder Bracket. Lower SXV-043. Each Bay Holds 200 rds 5.56 or 7.62x51	SXV-032
6. SXV 2 Bay 50 Cal Ammo Bin Use with Ammo Can Holder Bracket. Upper SXV-042. Lower SXV-0 100 rds .50 Cal	<b>SXV-034</b> 043. Each Bay Holds
7. SXV 3 Bay 50 Cal Ammo Bin Use with Ammo Can Holder Bracket. Lower SXV-043. Each Bay Holds 100 rds .50 Cal	SXV-036
8. Upper SXV ACH Bracket	SXV-042
9. Lower SXV ACH Bracket	SXV-043





## **BUILD YOUR MOUNT**

SXV Mounting Bracket Swing Arm Pintles





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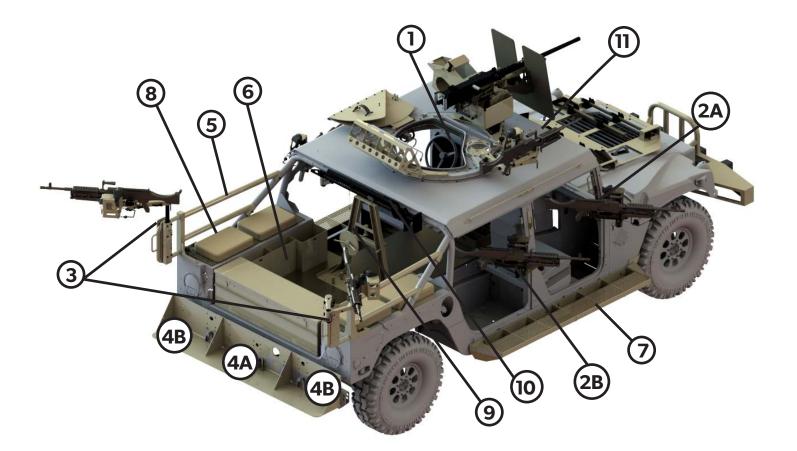
See Options Pg 42

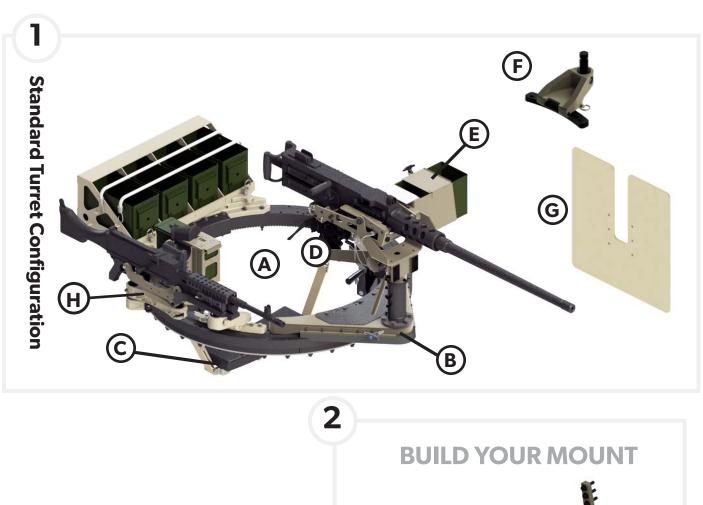


VEHICLE MOUNTS

H24-12 MG Mount See Options Pg 18

## **HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE (HMMWV)**

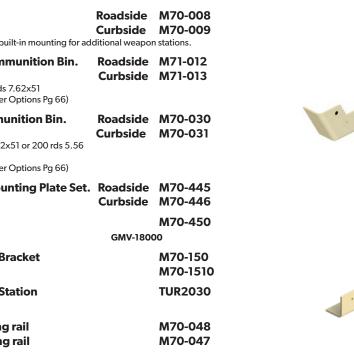




### HMMWV

**VEHICLE MOUNTS** 

1. MSG Standard HMMWV Turret Configuratio	n TUR1251	5. Assault Cargo Rail.
<b>A. 360 degree 42" Turret (Turret Options Pg 28)</b> Holds 4 x .50 Cal Ammo Boxes (100 rounds each) (MG and Ammo Carrying options Pg 34)		Load bearing bedrail with built-in moun
B. Fixed A-Frame (A-Frame Options Pg 29)		6. 3-Bay "L-Shaped" Ammunition
C. Quick Release Sling Seat D. Manual Traversing Mechanism		200 rds .50 Cal and 800 rds 7.62x51 (Multiple Ammo Can Holder Options Po
E. M2/MK19 Mounting system (MG mounting option)	ns Pg18)	7. 5-Bay Outboard Ammunition B
F. Secondary Weapon Station G. Front Shield (See options Pg 38)		Each Bin holds 200 rds 7.62x51 or 200 Requires jack rail kit (Multiple Ammo Can Holder Options Po
H. Secondary Weapon Swing Arm 2. Medium Machine Gun Mounting Systems		8. Two Seat Pad and Mounting Pl
A. A-Pillar Curbside Adjustable Pintle Short Adjustable Pintle Long Adjustable Pintle	M09-160 M09-199	9. Spare Tire Carrier Alternative
B. B-Pillar Roadside Bracket	M09-152	10. Hi-Lift 48" Jack and Bracket
C. B-Pillar Curbside Bracket	M09-150	Mounting Bracket
3. Rear Machine Gun Mounts		11. Secondary Weapon Station
· · · · · · · · · · · · · · · · · · ·	otions Pg 43) MV-22002 MV-22001	12. Jack Rail Kit A. Curbside mounting rail B. Roadside mounting rail





## HMMWV







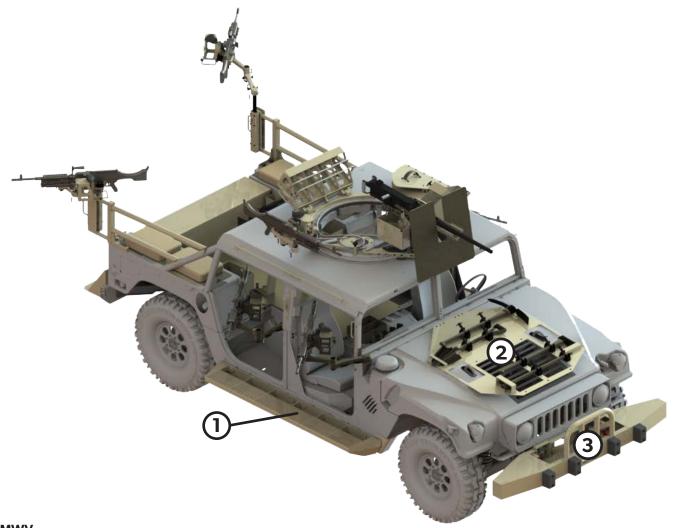
SA20 Swing Arms See Options Pg 42

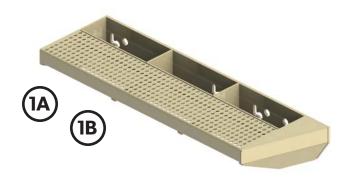


H24-12 MG Mount See Options Pg 18

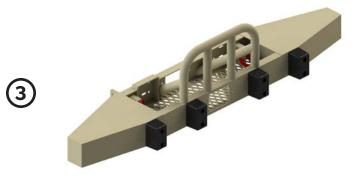


## **HMMWV ACCESSORIES**













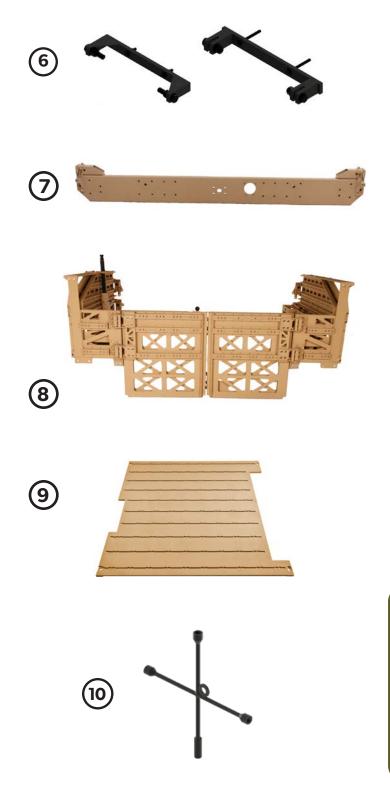
### HMMWV

**VEHICLE MOUNTS** 

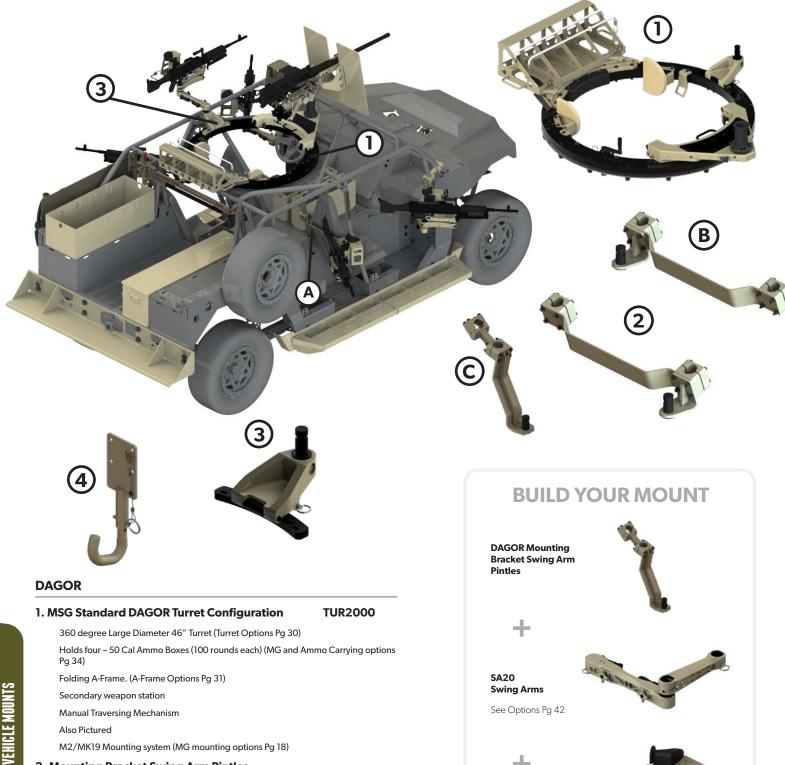
1. Side Troop Steps with Integrated Ammunition Bins		6. Kit,	
Three ammo bins each. Each bin carries 200 rds 7.62x51 or 200 rds 5.56		7. Reai	
A. Right Front/Left Rear B. Left Front/Right Rear	M98-067 M98-068	8. Rea Cre	
2. Lightweight Pioneer Tool Kit Includes Mounting Bracket with Axe, Shove pioneer tools on page 65)	el, Sledgehammer and Mattock Pick. (See	9. M11 Wh Wh	
3. M1165 Front Bumper Front Push Bumper Aluminum Steel	M70-388 GMV-20000 GMV-20000-03	See 10. Fou Spl	
4. Winch Plate Synthetic Line and Hook Supports Warn Industries Winch (PN 64730 20,000 lb. breaking strength	GMV-35001 GMV-35011 GMV-35010 D). 75 feet of synthetic winch line and a		
5. M1165 Side Troop Steps Driver Side Curbside Each section holds hold three 230 lb. soldie (Mounting Bars needed. Driver Side GMV-2			

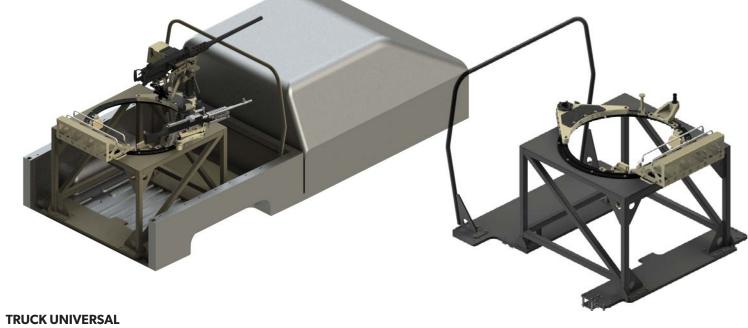
6. Kit, Bracket, Brush Guard for Electric Wench	K70-101	
7. Rear Bumper	GMV-33000	
8. Rear Enclosure GMV-6 Creates rear enclosure for M1165 HMMWV. Armored and unarmored.		
9. M1165 Catch Plate Cargo Area	GMV-61000	
Wheel Well Roadside	GMV-61202	
Wheel Well Curbside	GMV-61201	
Secure cargo to the floor. MS33601B slot profile. Various vehicle compatibility.		
10. Four Socket Lug Wrench w/One Deep Socket for Split Rim Hardware	M70-313	

## **HMMWV ACCESSORIES**



## DAGOR





### MSG 42" Turret and Stand for Bed of non-Standard Vehicle

TUR4008

The 42" Turret mounts into the frame and secures into baseplates in the bed of a non-stan-dard vehicle. Includes a scarf rail to prevent the gunner from shooting the cab of the vehicle.

## **HIMARS AND M270**



Manual Traversing Mechanism Also Pictured M2/MK19 Mounting system (MG mounting options Pg 18)

2. Mounting Bracket Swing Arm Pintles

A. B-Pillar curbside bracket	DGR-002
B. B-Pillar roadside bracket	DGR-012
C. A-Pillar curbside bracket	DGR-001
3. Folding Secondary Weapon Station	TUR2030
4. DAGOR Stretcher Hook	DGR-020



## **TRUCK UNIVERSAL**

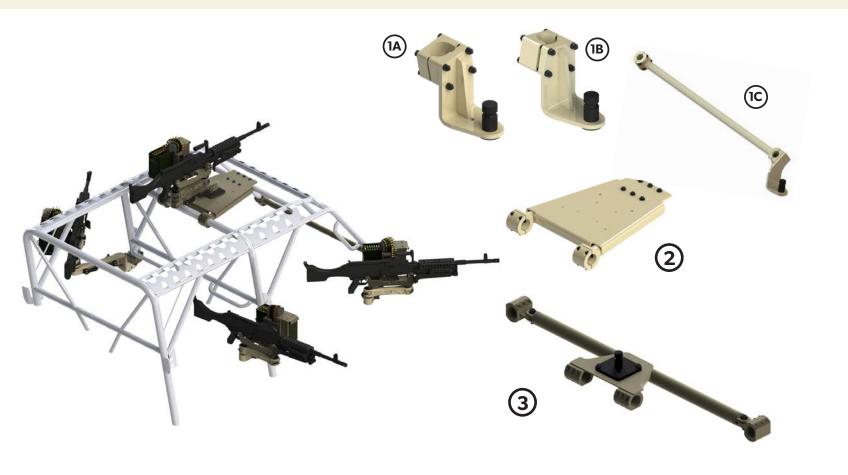
Engage with MSG to design and produce customized parts.

D

47			VEHICLE MOUNTS
l	HIMARS AND M270		
	1. M270 Swing Arm Pintle Bracket Assembly	M09-177	
:	2. HIMARS Armored Cab Swing Arm Pintle Bracket Assembly	K10-605	
:	3. HIMARS Unarmored Cab Swing Arm Pintle Bracket Assembly	M10-605	

## **TOMCAR AND HAVOC**

## **RANGER FIRE SUPPORT SYSTEM (RFSS)**





### **Tomcar and Textron HAVOC**

1. Mounting Bracket Swing Arm Pintles				
A. Tomcar B-Pillar curbside bracket	M10-324			
B. Tomcar B-Pillar roadside bracket	M10-325			
C. Tomcar A-Pillar Swing arm bracket	M10-320			
D. Textron HAVOC B-Pillar bracket	TXT-110			
E. Textron HAVOC A-pillar	TXT-100			
2. Tomcar ROPS Mount No Pintle. Takes Flat-Base Mounting Bracket.	<b>M10-350</b> M09-191			
3. HAVOC ROPS Mount	TXT-130			

## **BUILD YOUR MOUNT**

TOMCAR Mounting Bracket Swing Arm Pintles





## **MORTAR CARRIER**

MSG produces modular mobile Fires Support Systems for integration on various vehicle chassis. The MSG RFSS consists of the Mortar Carrier and the Ammunition Carrier, both built on the Polaris Ranger. Both vehicles can be center-loaded in a CH-47 at the same time. They have a combined weight of 6,400 lbs. including a four-man crew, combat equipment, and 28 rounds of 120mm ammunition. Each is fitted with a mounting bracket to allow the use of the MSG swing arm for machine guns.



The Mortar Carrier includes the M120 Mortar with the Mortar Fire Control System (MFCS), Pointer, PLUMMSS Control Box, PLUMMSS Programing Wand, and 85 AMP 24 Volt APU. It includes storage for 6 x 120mm mortar rounds of ammunition. The custom-designed battery box provides an additional 8 hours of quiet system use. The system accepts power from the generator, vehicle, batteries, or AC connections. It provides power to the hydraulic lift, the MFCS, communications seer, vehicle, and AC outlet.

## AMMUNITION CARRIER

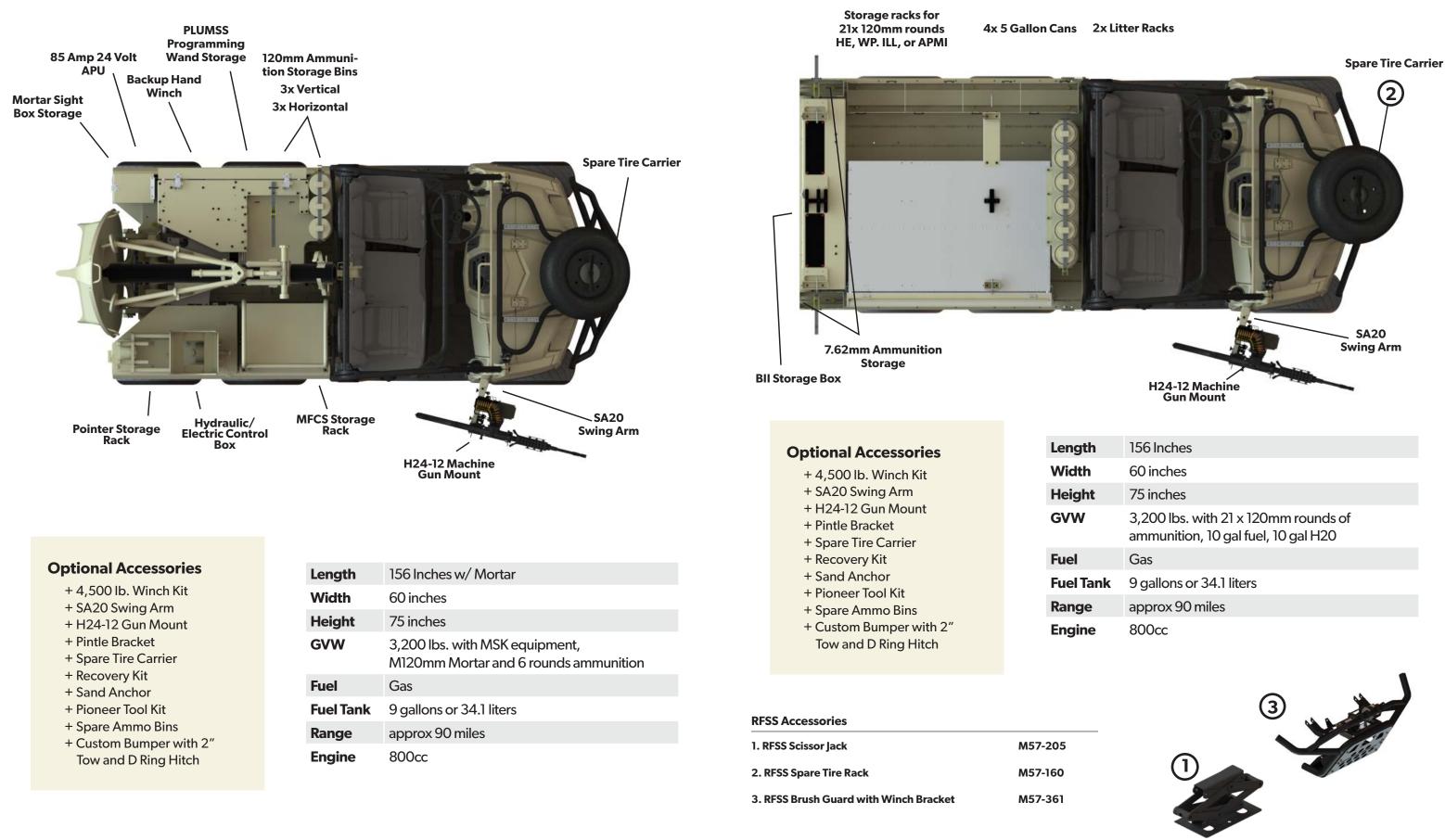
Custom designed front bumpers can accommodate a spare tire carrier, as well as optional pioneer tool kits. The bumper is designed to accommodate an electric winch. MSG also can provide optional recovery kits designed specifically for ATVs.

The Ammunition Carrier storage racks can hold 22 120mm mortar rounds, four five-gallon water or fuel cans, and four 200 round 7.62mm ammo cans. The rear of the vehicle has been outfitted with a cargo box for BII and other mission essential gear. The top of the racks and cargo box have been fitted with litter attachment points to allow two litters to be secured to the top.



## **RFSS - MORTAR CARRIER**

## **RFSS - AMMUNITION CARRIER**

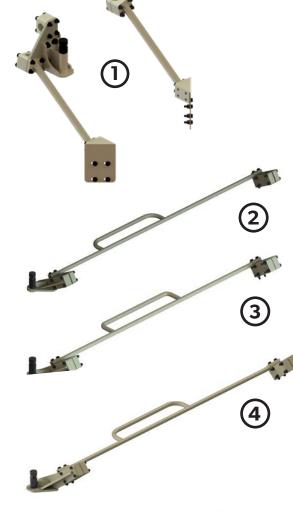


gth	156 Inches
th	60 inches
ght	75 inches
V	3,200 lbs. with 21 x 120mm rounds of ammunition, 10 gal fuel, 10 gal H20
	Gas
Tank	9 gallons or 34.1 liters
ge	approx 90 miles
ine	800cc

## **MISCELLANEOUS VEHICLE ACCESSORIES**

## **MISCELLANEOUS VEHICLE ACCESSORIES**









1. Grat	o Handle		M70-044
2. Ang	led Grab Handle		M70-045
3. Load	d-Bearing Vest Hook		M70-250
4. Gre	nade Holder and Mounting	bracket M70-249	-REVA, M70-4
5. Infra	ared (IR) Light		M70-296
6.12V	DC Waterproof Receptacles	5	M70-253
7. Pion	eer Tools		
Тос	ols mounted in all pioneer took kit mou	inting brackets	
A.	Ахе	M70-315	
В.	Sledgehammer	M70-215	
C.	Mattock	M70-217	
D.	Shovel	M70-216	
8. Mor	tar Trailer		12AA01000
9. ATV	Bed Plate		0GR6400

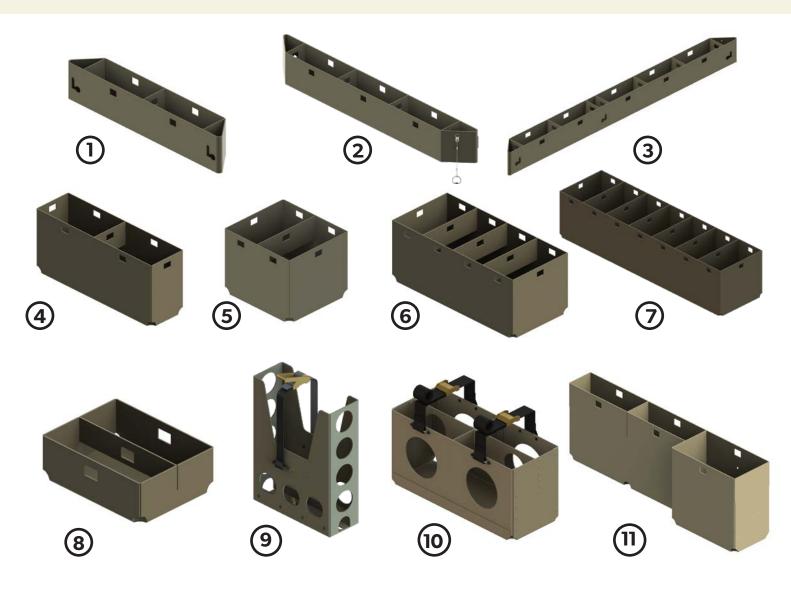
### **Misc Vehicle Swing Arm Mounting Brackets**

1. Polaris MV850 A-Pillar Curbside Mounting Bracket	MV8-004
2. Polaris Ranger A-Pillar Curbside Mounting Bracket	M10-306
3. Kawasaki Teryx A-Pillar Curbside Mounting Bracket	M10-300
4. Can-Am Commander A-Pillar Curbside Mounting Bracket	M49-001
5. Can-Am Outlander Front Cargo Rack Mounting Plate	
with Swing Arm Mounting Pintle	M49-025



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## **VEHICLE MOUNTED AMMUNITION CAN HOLDERS (ACH)**



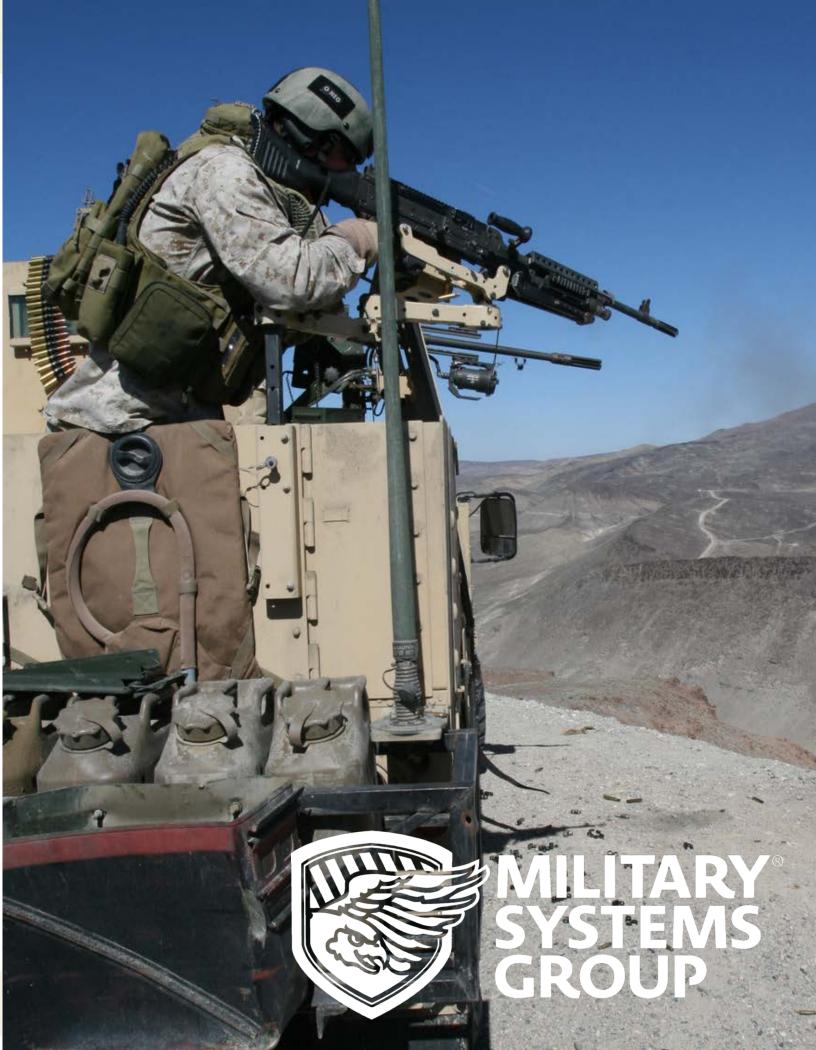
### Vehicle Mounted Ammunition Can Holders (ACH)

- 1. 2 Bay Outboard ACH. Roadside M70-549. Curbside M70-550 Each Bay Holds 200 rds 5.56 or 7.62x51
- 2. 3-Bay Outboard ACH. Roadside M70-027. Curbside M70-028 Lightweight 3-Bay Outboard ACH. GMV-60502 Each Bay Holds 200 rds 5.56 or 7.62x51
   3. 5-Bay Outboard ACH. Roadside M70-030. Roadside M70-031 Each Bay Holds 200 rds 5.56 or 7.62x51
   4. 2-Bay Inboard Double Inline .50 Cal ACH M70-024
- 4. 2-Bay Inboard Double Inline .50 Cal ACH<br/>Each Bay Holds 200 rds .50 CalM70-025. 2-Bay Inboard Double Side by Side .50 Cal ACH<br/>Lightweight 3-Bay Inboard Double ACH<br/>Each Bay Holds 200 rds .50 CalM70-026. 4-Bay Inboard Double .50 Cal ACHM70-02

6.4	I-Bay Inboard Double .50 Cal ACH	
	Each Bay Holds 200 rds .50 Cal	

-550	7. 7-Bay Inboard Double .50 Cal ACH Each Bay Holds 200 rds .50 Cal		M70-021
<b>-028</b> 502	8. 2-Bay Inboard Double ACH 7.62x51 Lightweight 2-Bay Inboard Short ACH Each Bay Holds 400 rds 5.56 or 7.62x51	GN	<b>M70-022</b> 1V-60006
-031	9. 1-Bay Inboard Double ACH 7.62x51 Holds 400 rds 5.56 or 7.62x51		M81-001
-024	10. 4-Bay Inboard Double ACH 7.62x51 Each Bay Holds 400 rds 5.56 or 7.62x51		M70-585
- <b>023</b> 001	<b>11. 3-Bay Inboard L-Shaped Double ACH.</b> Holds 800 rds 5.56 or 7.62x51 and 200 rds .50 Cal	Roadside Curbside	M71-012 M71-013
-020	Lightweight 3-Bay Inboard L-Shaped Double ACH Holds 800 rds 5.56 or 7.62x51 and 200 rds .50 Cal		GMV-60005 GMV-60004

Note: Any .50 Cal Bin can alternatively carry a 100 rd. can or a PA70 can with 225 rds .50 Cal.





# NAVAL SYSTEMS



Page 68



Naval Machine Gun Mounts Organized By Weapon

Page 70



Machine Gun Mount Accessories

Page 70

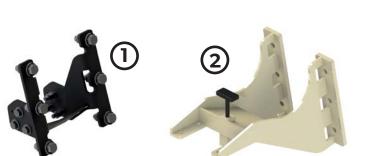


## NAVAL FRONT SHIELDS AND BRACKETS

## NAVAL TRIPOD, SWING ARMS AND PEDESTALS

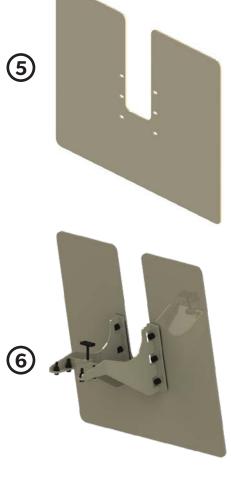






### **Front Shields and Brackets**

1. Mounting Bracket only for -9 Mounts	M98-110-01
2. Front Shield Bracket for MK93 Six-hole mounting plate for Shield. Mounts to MK93	M35-310
<b>3. Front Armor Shield</b> 27" X 27". 3/8" thick armor	M98-002
4. Front Armor Shield Assembly H24/H60 Includes Shield M98-002 and #1 Mounting Bracket	M98-110
5. Front Armor Shield 32" X 26"25" thick armor	TUR1110-01
6. Front Armor Shield Assembly for MK93	M35-02







7. Pedestal Offset Pintle (POP) Seated Gun Mount for Light and Heavy Machine Guns. Turns 36 any vehicle platform including boats. Made from stainless steel Options include low or high seat back and standard or tall base	base for maritime use.
8. MK16 MOD9 Tripod Assembly Pedestal Gun Mount for Light and Heavy Machine Guns. Turns 3 bed of nearly any vehicle including boats.	<b>MO3-600</b> 360°. Installs in cargo
9. 33" MK16 Tripod Four-hole mounting pattern for multiple possible attachments	M03-400
10. MK16 MOD8 Mounts Heavy Machine Guns. Adjustable train stops to limit fiel	M03-602 ds-of-fire
11. SA9 Base Assembly	SA9-011
12. SA9 MOD 1 Swing Arm	SA9-MOD1
13. SA9 MOD 2 Swing Arm	SA9-MOD2

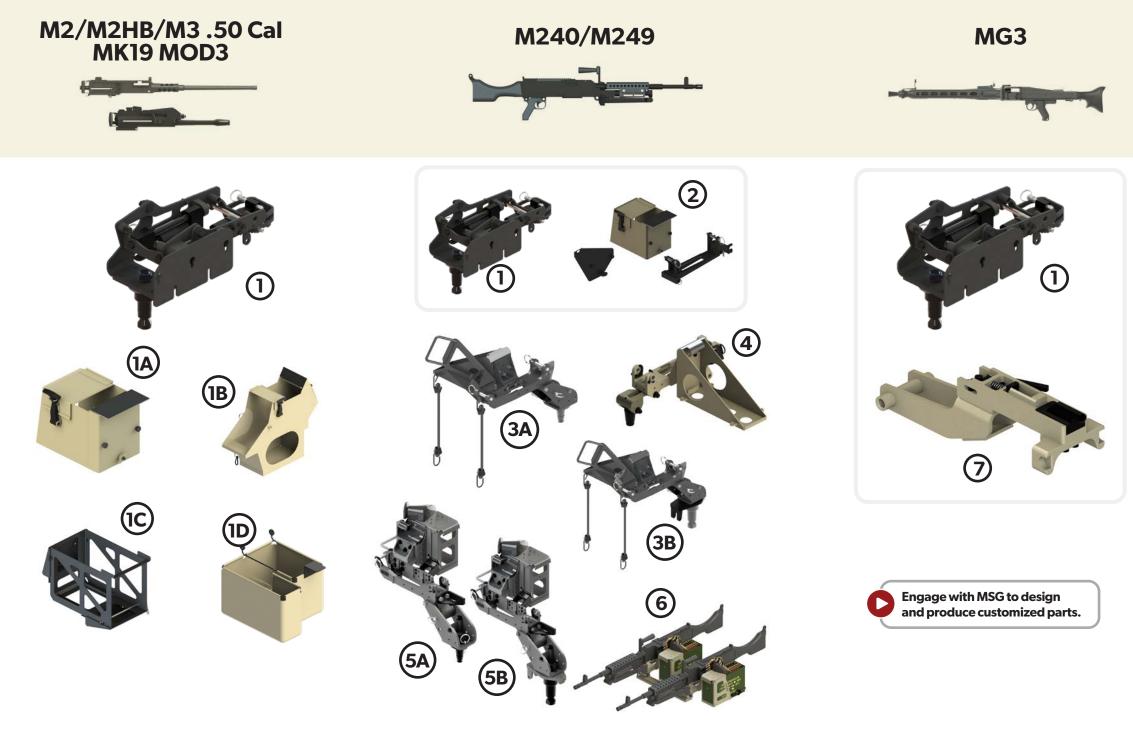


NAVAL MOUNTS



### **Fixed Base Pedestals**

For Medium Machine Gun Mounts. Optional Train stops to set traversing limits15. PS41 Plug-In PedestalM06-04116. P41 Fixed-Base Pedestal 41"M05-04117. P3 Fixed-Base Pedestal 3"M05-00318. P7 Fixed-Base Pedestal 7"M05-00719. P18 Fixed-Base Pedestal 18"M05-018



### M2/M2HB/M3 .50 Cal, MK19 MOD4

1.	M2	93 MOD4 Machine Gun Mo .50 Cal machine gun and MK19 40m pters for mounting various medium m	m grenade launcher mou	M35-008 nt. Base for MSG
	Α.	.50 Cal and 7.62 Ammunition Can I Holds one 100 rd50 Cal can or one	Stainless Steel	M36-403 M35-403
	В.	Multi-Caliber Ammunition Can Ho Holds one 100 rd50 Cal can or one Holds one PA70 can with 225 rds .5	e 200 rd 7.62 can	M35-413
	c.	<b>40mm Ammunition Can Holder.</b> Holds one 32 rd 40mm can	Steel Stainless Steel	M36-404 M35-404
	D.	MK93 Catch Bag Steel frame, fabric link and brass cate	ch bag	6650723

### M240/M249

<ol> <li>MK93 MOD4 Machine Gun Mount M2 .50 Cal machine gun and MK19 40mm grenade launch adapters for mounting various medium machine guns.</li> </ol>	M35-008 er mount. Base for MSG
2. M249/M240 Adapter Kit for MK93 Installs into MK93 OR	M35-800
<ol> <li>H24-9</li> <li>A. With tapered standard NATO pintle</li> <li>B. With large standard NATO pintle</li> </ol>	H24-9-MOD1 H24-9-MOD2
4. H24 OTM for Use with T&E With ears for T&E attachment	M24-029
5. H24-9 for MK48 A. With tapered stadard NATO pintle B. With large standard NATO pintle	H24-9-MOD3 H24-9-MOD4
6. H24 TWO Twin M240/M249 Mount Mounts two weapons on the same system	M24-099

### MG3

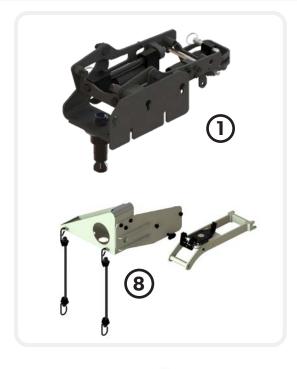
1. MK93 MOD4 Machine Gun Mount M35-008 M2 .50 Cal machine gun and MK19 40mm grenade launcher mount. Base for MSG adapters for mounting various medium machine guns.

7. MG3 Adapter Kit for MK93 M36-120 Installs into MK93





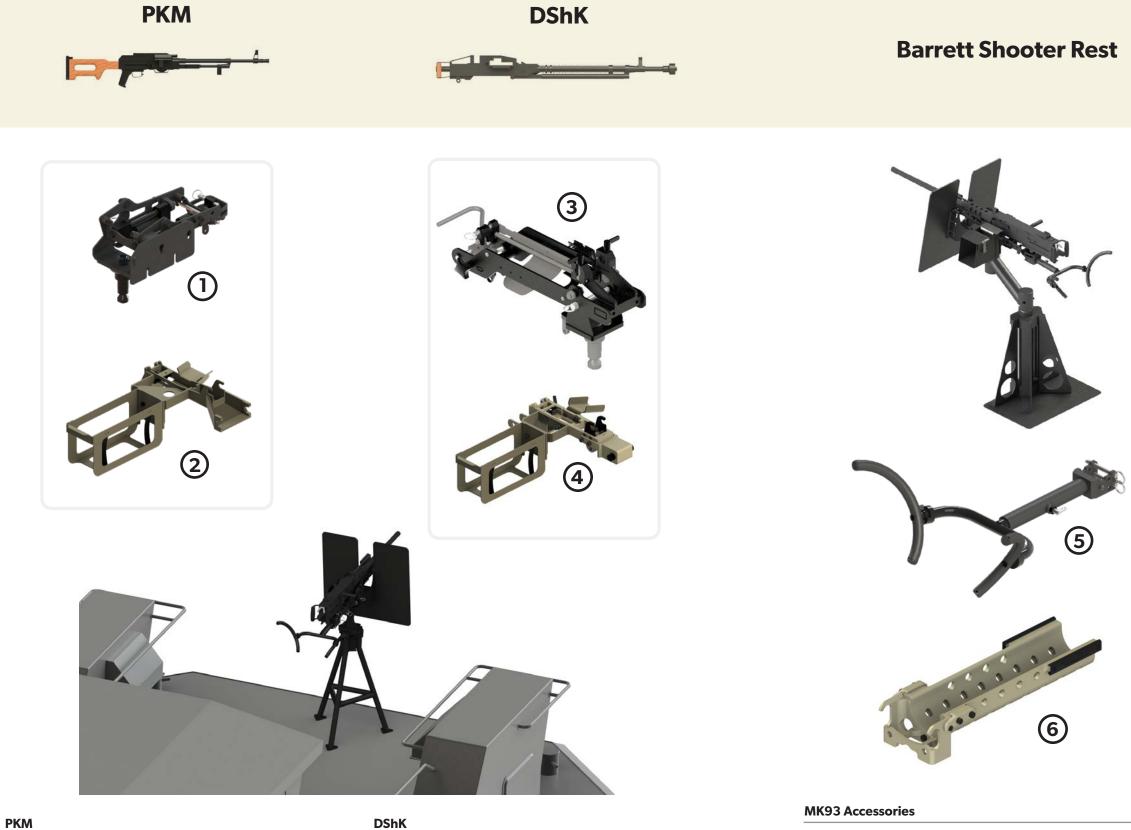






### M60/MK43

<ol> <li>MK93 MOD4 Machine Gun Mount M2 .50 Cal machine gun and MK19 40mm grenade launcher mon adapters for mounting various medium machine guns.</li> </ol>	M35-008 unt. Base for MSG
8. M60 Adapter Kit for MK93 Installs into MK93	M25-805
9. H60-6	M25-800
Standard NATO Tapered Pintle - G3 Cone	



1. MK93 MOD4 Machine Gun Mount M35-008 M2.50 Cal machine gun and MK19 40mm grenade launcher mount. Base for MSG adapters for mounting various medium machine guns.

2. PKM Adapter Kit for MK93	
Installs into MK93	

### DShK

M38-100

3. DShK Machine Gun Mount with Naval Pintle M37-105 Made with non-corrosive materials

M38-240

4. PKM Adapter Kit for DShK Installs into DShK Machine Gun Mount

- 5. MK93 Dual Shoulder Rest M36-090 Provides significantly improved control and accuracy. Attaches to the MK93. Installation requires no tools.
- 6. MK93 Tri-Rail Light Bracket M36-900 Three Picatinny rails for attaching optics. Does not interfere with quick change barrel.

NAVAL MOUNTS

## **Barrett Shooter Rest**





### **Barrett Shooter Rest**

### 7. Barrett Shooter Rest

Mounts the Barrett M82 and M107 .50 Cal rifles. Incorporates a small tapered pintle.

- Fine traverse, elevation and cant adjustments
- Adjustable drag
- Reduces recoil by 70%

BSR-001

NAVAL MOUNTS

## REFERENCE







MSG on HIMARS



# LARGE FORMAT FABRICATION & CONTRACT MANUFACTURING

MSG works closely with its sister company, Richland Industries, LLC for large fabrication and contract manufacturing. Richland primarily serves the water treatment, mining and oil and gas industries.



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21 Heavy Duty Overhead Cranes

**CNC Programmers** 

**CNC And Manual Machining** 

Fabricating

Conventional And CNC Turning (Lathe)

**Conventional And CNC Milling** 

**MIG and TIG Welding** 

**Press Braking** 

Grinding

Rolling

Stainless Steel Center Tube for Clean Water Processing



Both **MSG** and **Richland** are owned by the same owners. Both companies are certified Service-Disabled Veteran Owned Small Businesses. Richland Industries is also a certified HUB Zone entity.

S	More Than 400,000 Sq/Ft of Manufacturing Space
	Laser Cutting
	Waterjet Cutting
	Plasma Cutting
I	<b>Conventional Cutting</b>
	Sandblasting
	Wet Paint (CARC Capable)
	Powder Coating (CARC Capable)
	<b>Program Management</b>
	ISO 9001: 2015 Certified





## **PRODUCT CATALOG**

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