



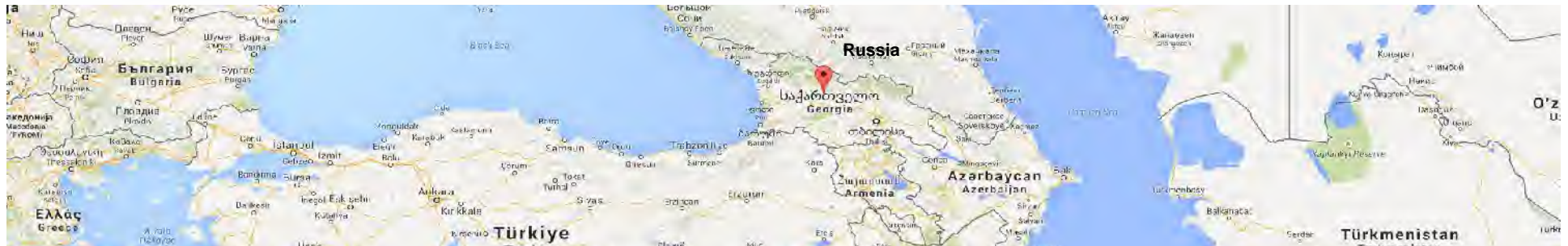
# State Military Scientific-Technical Center Delta

Corporate Presentation

2015



## About GEORGIA



Capital – Tbilisi Area- 69,700 square km Population - 4,630,841 National Currency – Lari (GEL)

GDP (nominal) - 14 370.0 (million USD) GDP growth - 7% GDP per capita – 3 103 (USD)



Georgia is the member of the following international organizations:

The United Nations (UN) The Council of Europe (CE) The World Trade Organization (WTO)

The Organization of the Black Sea Economic Cooperation (BSEC) The Organization for Security and Cooperation in Europe (OSCE)



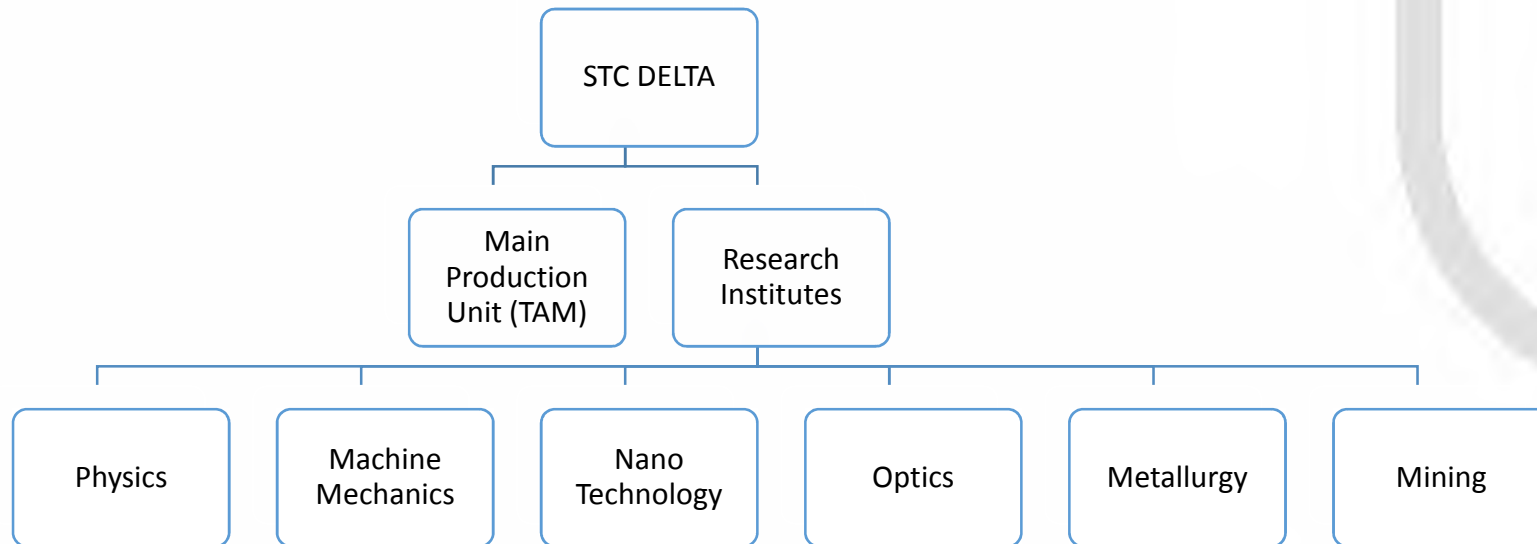
## Country Rating



- According to by the World Bank (WB), the International Finance Corporation (IFC) and PricewaterhouseCoopers (PWC) surveys, Georgia has moved up with 22 position as it was on the 61st position in 2012.
- Doing Business 2012 report places Georgia 16th in terms of Ease of Doing Business, with its overall rating one place higher than last year.
- International Ratings Agency "Moody's" published Georgian sovereign credit rating with category Ba3 (Long Term Local and Foreign Currency Rating), that means, that Georgia's sovereign rating has improved with one step ahead.
- According to the "Transparency International", Georgia is the top country in the post-soviet region (except the Baltic States) in terms of fighting corruption.
- According to the „Transparency International's" „Global Corruption Barometer 2010", Georgia ranks the first among world countries in the term of decrease corruption level.
- The 2011 EBRD survey on countries in transition singles out Georgia as the most successful country in our region (Eastern Europe and Caucasus) in terms of institution building, on par with Baltic States.



# STC DELTA Structure







## STC DELTA Main Production Facility (TAM)



TAM (Tbilisi Aerospace Manufacturing) is Delta's main production unit. TAM was established in December 15, 1941. With its 560,000 m<sup>2</sup> territory TAM accommodates number of production processes. TAM has its own 2500 meter aircraft run way facility with total area of 2,500,000 m<sup>2</sup>.

### TAM facilities include:

- Corporate Office Building
- Design Bureau
- Machining
- Metallurgy
- Special Tooling
- Sheet Metal Forming
- Hot Forming & Tubing
- Laboratories
- Aircraft Assembly
- Run Way

Total number of employees at  
TAM – 1637



# STC DELTA & TAM Product History



1941



1941-1950



1951-1977



1978-1990



1990-2000



2001-Current

TAM established

LaGG-3

La-5

Yak-3

Yak-15

Yak-17

Yak-17UT

Yak-23

MiG-15

MiG-17

MiG-21

MiG-21U

MiG-21UM

La-17

K-10 missile

Su-25

Su-25K

Su-25UB

Mi-8

Mi-24

R-60 missile

R-73 missile

Su-25 Scorpion

ELITE Jet

TAM Jet

Antenna-reflector

Gas heaters

HDPE Polyethylene

pipes

Hydro turbines

IFV "LAZIKA" (2011)

Arm. Vehicle "DIDGORI 1"

Arm. Vehicle "DIDGORI 2"

Arm. Vehicle "DIDGORI 3"

Mortars (60mm, 82mm, 120mm)

Anti-tank Rocket Propelled

Grenade Launchers

Anti-tank Mines

Assault Rifles

Ammunitions

Other Military Production



# International Presence



- STC Delta is presented in 25 countries worldwide

# STC Delta Products





# Military Aviation





## Manufacturing, Overhaul, Current Maintenance and Modernization of SU-25 Attack Aircraft



- TAM has always been the only manufacturer of SU-25 type aircraft and owns all documentation and drawings
- TAM manufactures various modifications of SU-25 type aircraft such as SU-25T, SU-25UB and upgraded SU-25KM (Scorpion)
- More than 800 SU-25 type aircrafts have been exported to different countries of the world (Former USSR, Eastern European, African, Asian, Middle East and Latin American countries)
- TAM provides overhaul, maintenance and modernization works for this aircraft according to the Customer's requirements.
- Greater experience and qualified workforce





## Overhaul, Repair and Modernization of MiG-21 Fighter Aircraft



- During its history, TAM manufactured MiG family aircrafts: MiG-15, MiG-15BIS, MiG-17, MiG-17PF, MiG-21U and MiG-21UM fighter aircrafts
- More than 1600 MiG-21U and MiG-21UM type aircrafts have been manufactured and delivered by TAM to different countries of the world (Former USSR, Eastern European, African, Asian and Central American countries)
- TAM has been the only manufacturer MiG-21UM twin-seater aircrafts
- Currently TAM provides overhaul, maintenance and modernization works for this aircraft according to the Customer's requirements.
- TAM can supply high quality new rubber fuel tanks for MiG-21 type aircraft
- Greater experience and qualified workforce





## Overhaul, Current Maintenance & Modernization of MI type Helicopters



- Overhaul of Mi-8 and Mi-24 type helicopters
- Current maintenance of Mi-8 and Mi-24 type helicopters
- Modernization of Mi-8 and Mi-24 type helicopters
- TAM has relevant capabilities, skilled and experienced workforce that can perform quality repair works according to customers' requirements



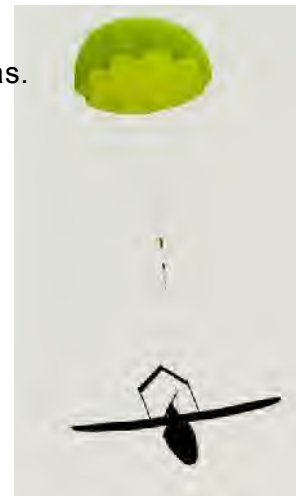




## Unmanned Aerial Vehicle



- Length -1,96 m
- Wingspan – 3.075 m
- Weight – 12 kg
- Speed – 60-160 km/h
- Combat range – 150 km
- Service ceiling – 100-3000 m
- Endurance – 8 hours
- Reconnaissance Equipment
- Gyro stabilized video and IR cameras.
- Photo camera equipped with gyro stabilizing mechanism.



# Civil Aircraft Manufacturing





## ELITE Jet

- Construction - Carbon Fiber
- Length - 12,16 m
- Height - 3,77 m
- Wingspan - 13,41 m
- Wing area - 18,91 m<sup>2</sup>
- Length of the passenger compartment - 5 m
- Width of the passenger compartment - 1,5 m
- Height of the passenger compartment - 1,52 m
- Empty weight - 1814 kg
- Max. take of weight - 3492 kg
- Payload - 603 kg
- Fuel weight - 850 kg
- Engine - 2xWilliams International FJ33-4
- Cruise speed - 760 km/h
- Economy cruise speed - 710 km/h
- Ceiling - 12000 m
- Range with max. payload - 2590 km
- Crew - 1-2
- Seats - 6-8



**ELITE Jet**  
6-8 seat very light jet

**TAM Jet**  
4 seat very light jet



# Civil Aircraft Manufacturing

## TAM Jet

Max. Speed (True)	694 km/hr	375 kts	
Max. Cruise Speed (True)	648 km/hr	350 kts	
Economic Cruise Speed (True)	574 km/hr	310 kts	
Take-off Speed	166 km/hr	90 kts	
Landing Speed	148 km/hr	80 kts	
Stall Speed:			
• Gross Weight.	144 km/hr	78 kts	
• Empty Weight.	129 km/hr	70 kts	
Max. Range	2500 km	1349 nm	
Ceiling	7620 m	2500 ft	
		0	
Take-off Distance	650 m	2133 ft	
Landing Distance	600 m	1969 ft	
Rate of Climb	15 m/c	3000 ft/min	
Maximum operational overload:	+ 3,6	-1,45	
Empty Weight	1600 kg	3555 lbs	
Gross Weight	2750 kg	6111 lbs	
Useful Load	350 kg	771 lbs	
Length	8,833 m	28.5 ft	
Wingspan	10,530 m	33.25 ft	
Height	2,877 m	9 ft	
Wing area	13,4 m <sup>2</sup>	144.6 sq.ft	
Fuel Capacity	1020 liter	270 gal	
cabin Seating	3 adults		
Air Frame	Prepreg Carbon/Nomex		
Engines Williams Int. (2) FJ33-4A	495 kg thrust	1100 lbs thrust	



**ELITE Jet**  
6-8 seat very light jet

**TAM Jet**  
4 seat very light jet



# Armored Vehicles





# Infantry Fighting Vehicle LAZIKA



## GENERAL

- Combat weight – 14000 kg
- Crew - 3
- Troops - 7

## DIMENSIONS

- Length – 6130 mm
- Width – 3068 mm
- Height - 2163

## SPEED

- Maximum speed – 70 km/h

## ENGINE

- Engine type – Diesel
- Engine horsepower – 400 hp

## ARMOR

Armor provides protection against 14.5 mm Б-32 type (armor-piercing) bullets. Protection level is enhanced by installation of additional steel or ceramic armor plates.

## ARMAMENT

Armament is located in the remote control module: Main armament - 2A14, 23 mm automatic cannon; Secondary armament - 7.62 mm twin mounted machine gun.

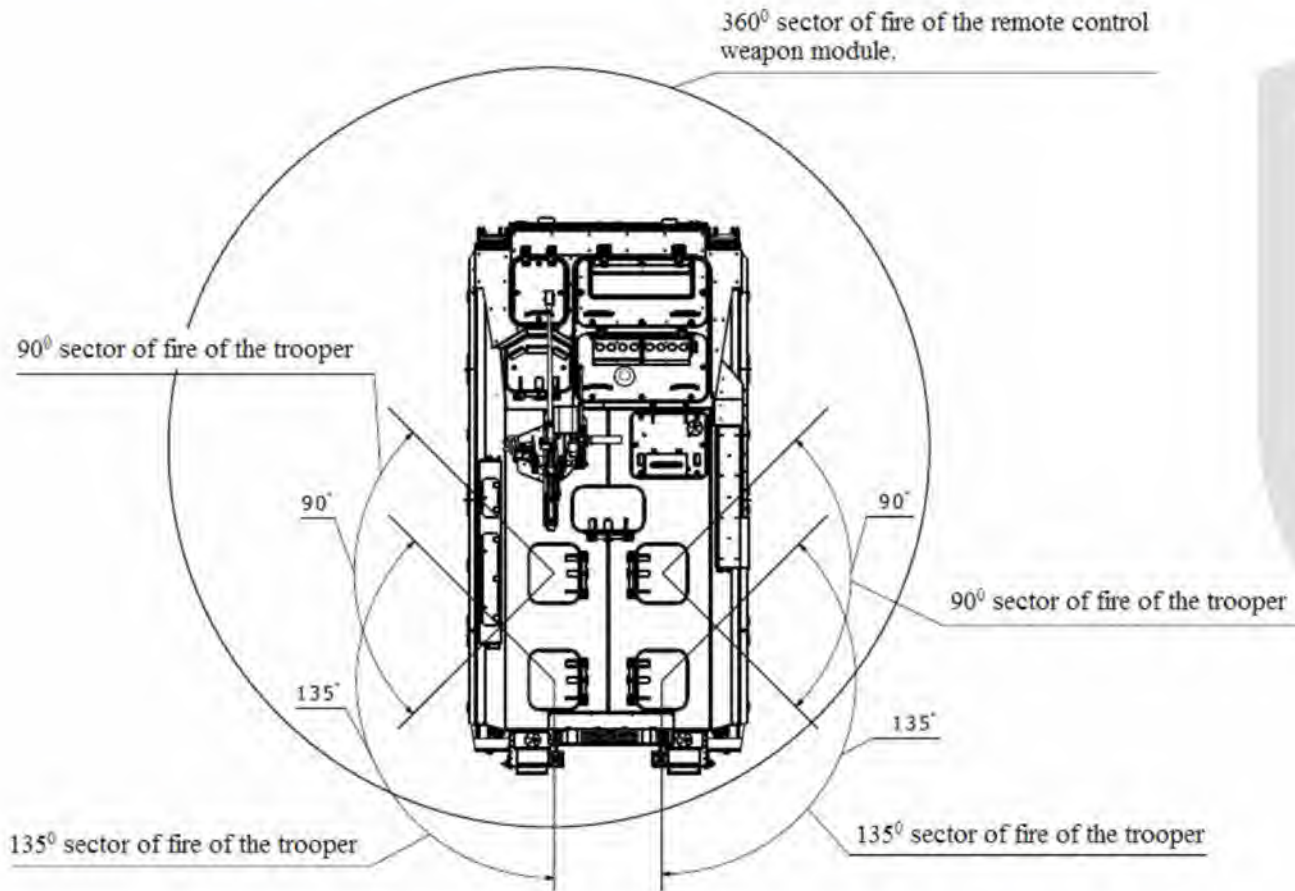
## AMMUNITION LOAD

23 mm shells, pieces -80.  
7.62 mm bullets, pieces - 500.





## Sectors of Fire from IFV LAZIKA





# Multipurpose Armored Vehicle DIDGORI



## DIDGORI - 1

### GENERAL

Empty weight – 8200 kg  
Combat weight – 8850 kg  
Crew - 3  
Troops - 6

### DIMENSIONS

Length – 6120 mm  
Width – 2350 mm  
Height (without turret) – 2350 mm

### SPEED AND RANGE

Maximum speed – 140 km/h  
Operational range – 500 km

### ENGINE

Engine type - Diesel  
Engine horsepower - 356 hp

### SUSPENSION

Suspension - 4x4

### ARMAMENT

Armament is located in the remote control module:  
Main armament - M-134G Minigun  
7.62x51 mm NATO, six-barreled machine gun.







# Multipurpose Armored Vehicle DIDGORI



## DIDGORI - 2

### GENERAL

Empty weight – 8010 kg  
Combat weight – 8610 kg  
Crew - 3  
Troops - 4

### DIMENSIONS

Length – 6120 mm  
Width – 2350 mm  
Height (without turret) – 2180 mm

### SPEED AND RANGE

Maximum speed – 140 km/h  
Operational range – 500 km

### SPEED AND RANGE

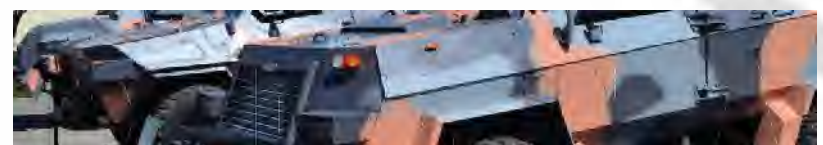
Maximum speed – 80 km/h  
Operational range – 500 km

### ENGINE

Engine type - Diesel  
Engine horsepower – 356 hp

### ARMAMENT

Main armament - NSVT 12,7 mm heavy machine gun





# Multipurpose Armored Vehicle DIDGORI



## DIDGORI - 3

### GENERAL

Empty weight – 9380 km  
Combat weight – 10100 km  
Crew - 6

### DIMENSIONS

Length – 6500 mm  
Width – 2110 mm  
Height (without turret) - 2260 mm

### SPEED AND RANGE

Maximum Speed – 75 km/h  
Operational range – 380 km

### ENGINE, TRANSMISSION

Engine horsepower – 160 hp  
Transmission – Mechanical

### SUSPENSION

Suspension - 6x6

### ARMAMENT

Armament is located in the remote control module:

Main armament - NSVT 12,7 mm machine gun  
Secondary armament - PKT - 7.62 mm twin mounted machine gun

### REMOTE CONTROL WEAPON

### MODULE

Traverse -  $\pm 360^\circ$ ;  
Elevation -  $-10^\circ/+ 85^\circ$





# Multipurpose Armored Vehicle DIDGORI

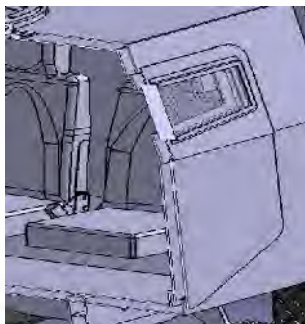


## DIDGORI Features

### DOUBLE LAYER MODULAR ARMOR

Vehicle features Double Layer Modular Armor state of art Technology. Which enables operator:

- Change armor panels in case of abnormal damage in field conditions;
- Reconfiguration of the protection level;
- Ensure additional thermal insulation...



### ANGULAR EXTERIOR DESIGN

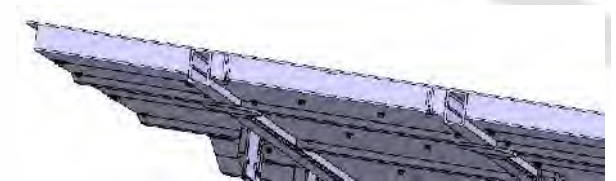
Special attention is paid to exterior design of the vehicle with optimal angle of the armor plate placing. Size of flat panels is reduced to minimum. Which enables:

- High structural stiffness;
- Increased protection against kinetic strength;
- Increased maneuverability.



### ADVANCED ANTY MINE PROTECTION

Hull of DIDGORI represents multilayer armor sandwich construction of armored steel and composite materials. Composite material acts as a dumper and absorbs shock waves. In case of abnormal damage outer layer and composite damper is easily replaceable.







# Multipurpose Armored Vehicle DIDGORI



## DIDGORI Features

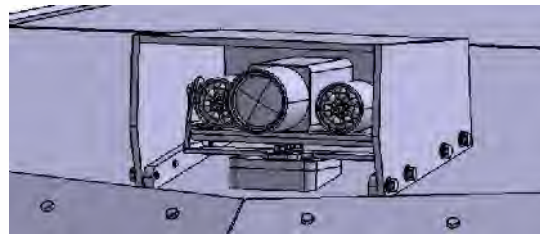
### ONBOARD NAVIGATION SYSTEM

DIDGORI – is equipped with the state of art GPS and GSM, short/ultra short connection navigation. Which enables:

- Navigation through different terrains;
- Location identification for control center;
- Integration of all information into 1 battlefield management system;
- Flexibility of information usage either on military applications, or on a simple remote devices (smartphone/lpad/Tablet/laptop)...

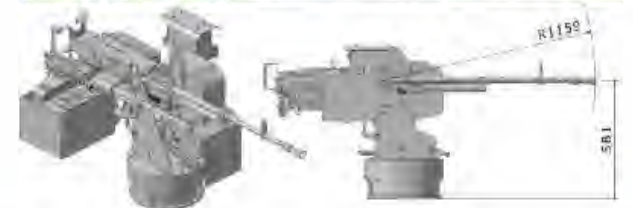
### DAY-NIGHT OPERATION CAPABILITY

DIDGORI in standard comes equipped with the Day-Night and FLIR (Front Looking Infra Red) cameras. Allowing crew to conduct night operations with zero external visibility.



### REMOTE FIRE CONTROL SYSTEM

Vehicle can be equipped with Remote Fire Control System which enables dislocation of operator below of firing level.





# Artillery Systems





## Mortar Systems



### 60 mm mortar

Caliber, mm 60  
Barrel Length, mm 650  
Base Plate Diameter, mm 300  
Weight, kg  
- Total 17.4  
- Barrel With Branch Block 3.8  
- Base Plate Compl. 3.8  
- Bipod 9.8  
- Double Charge Safety  
Elevation: Max. 80°  
Min. 45°

Traverse +/-40  
Range Of Fire, m: Max. 2550  
Min 94  
Rate Of Fire, rounds/min 15  
Muzzle Velocity, m/sc 222  
Crew 3  
Life Expectancy, rounds 10 000





## Mortar Systems



### 82 mm mortar

Caliber, mm 82  
Barrel Length, mm 1220  
Base Plate Diameter, mm 600  
Weight, kg  
- Total 51  
- Barrel With Branch Block 18.5  
- Base Plate Compl. 10.8  
- Bipod 17.7  
- Double Charge Safety  
Mechanism Weight 4  
Elevation: Max. 80°  
Min. 45°

Traverse - +/-40  
Range Of Fire, m: Max. 3050  
Min 400  
Rate Of Fire, rounds/min 15  
Muzzle Velocity, m/sc 221  
Crew 4  
Life Expectancy, rounds 10 0001





## Mortar Systems



### 82 mm mortar

Caliber, mm 82  
Barrel Length, mm 1220  
Base Plate Diameter, mm 600  
Weight, kg  
- Total 51  
- Barrel With Branch Block 18.5  
- Base Plate Compl. 10.8  
- Bipod 17.7  
- Double Charge Safety  
Mechanism Weight 4  
Elevation: Max. 80°  
Min. 45°

Traverse - +/-40  
Range Of Fire, m: Max. 3050  
Min 400  
Rate Of Fire, rounds/min 15  
Muzzle Velocity, m/sc 221  
Crew 4  
Life Expectancy, rounds 10 0001







## Mortar Systems



### 120 mm mortar

Caliber, mm 120  
Barrel Length, mm 1740  
Base Plate Diameter, mm 900  
Weight, kg  
- Total 216  
- Barrel With Branch Block 73.4  
- Base Plate Compl. 64.5  
- Bipod 73  
- Double Charge Safety  
Mechanism Weight 5  
Elevation: Max. 80°  
Min. 45°

Traverse - +/-50  
Range Of Fire, m: Max. 7100  
Min 480  
Rate Of Fire, rounds/min 15  
Muzzle Velocity, m/sc 325  
Crew 5  
Life Expectancy, rounds 10 000





## Mortar Systems



### Noiseless Mortar GNM "MKUDRO"

Barrel Length, mm 395

Weight, kg 2.5

Elevation: Max. 85°

Min. 30°

Range Of Fire, m: Max. 450, Min

50

Rate Of Fire, rounds/min 30

Life Expectancy, Rounds 15 000

Noise Level, db 69

Bomb Weight, Kg 1,5

Bomb Effective Casualty Radius, 25m

GNM is noiseless mortar designed for special forces and tactical groups for concealed operations. Crew can hit the target and yet stay unnoticed, which is great advantage for modern small units warfare. Noiseless function of system is achieved due to special design of mortar and grenades. In addition to this advantages Ultra light construction makes it easy to be transported by soldier over great distances. Muzzle loaded system enables usage of mortar in conventional way without additional training.





## GG 122



Crew - 5

Chassis - KpA3-63221

Quantity of the launch tubes – 40 pieces

Duration of complete salvo fire – 20 sec

Maximum speed on asphalt road – 70 km/h

Operational range – 500 km

Caliber – 122 mm

Firing range:

Minimal – 1 000 m

Maximal – 45 000 m



# Personal Protection Equipment







## Armor Vests



### Mark I Specifications

#### NIJIII

##### Description

Ballistic Body Armor Tactical model with MOLLE webbing produced according as **NIJ0101.04 standard with III Level** of protection.

- Weight \_ 7.5kg<sup>(1)</sup>;
- Protected area \_ 42-44 dm<sup>2(2)</sup>.

#### NIJIII+ 7.62x54

##### Description

Ballistic Body Armor Tactical model with MOLLE webbing produced according as **NIJ0101.04 standard with III+ 7.62x54(PK) Level** of protection.

- Weight \_ 8.5kg<sup>(1)</sup>;
- Protected area \_ 42-44 dm<sup>2(2)</sup>.

#### NIJIV

##### Description

Ballistic Body Armor Tactical model with MOLLE webbing produced according as **NIJ 0101.04 standard with III Level** of protection.

Weight \_ 9.5kg<sup>(1)</sup>;  
Protected area \_ 42-44 dm<sup>2(2)</sup>..

<sup>(1)</sup> Including the Plates

<sup>(2)</sup> Vary according to the size M/L/XL





## Armor Vests



### Mark III Specifications

POLICE VEST	G-4
Bullet Protection	NIJ Level IIIA
Fragmentation Protection	V50-750 m/s (grams)
Gross Weight (Medium)	3.2 kg
Surface Area Protected	40 dm <sup>2</sup> (M size)
Structure	Flexible
UV/Moisture Protection	Ballistic pack seal in a PU coated nylon bag
Sizes	S,M,L,XL,XXL
Colors	Beige, Dark Blue, Olive Green or Custom
Optional Extras	Ballistic Plates





## Armor Vests



### Standard Features:

- Full torso coverage with side overlapping;
- Easy-care, dry-cleanable Cordura® outer shell;
- Pockets for hard armor inserts;
- 360° PALS(MOLLE) webbing;
- Waterproof ballistic panel cover;
- Reinforced drag handle;
- Emergency removal kit.

### Options:

- Anti-stab add-on protection system;
- Neck and Groin protection;
- Additional pouches, holsters and magazine boxes;
- Custom sizes;
- Custom colors;



\* Both vests (Mark I and Mark II) can be custom tailored and fitted to the exact demands of the partner.





## Armor Vests



Delta offers conventional infantry Armor Helmets. Quality materials and precious manufacturing process, in conjunction with strict quality control ensures protection level of **NIJ 01.01.04 IIIa**. Helmet delivers advanced ballistic, fragmentation, and impact head protection, with unsurpassed comfort for long-term use. Special combination of materials enables us to keep the weight of helmets as low as 1.2-1.4 kg depending on size. As an option We can offer rail for night vision and helmet shapes specifically design for our customers.





# Anti-Tank Systems





## Anti Tank Systems

**RPG-7** -Battle proven design assembled with modern technologies.



### 40mm Rocket-Propelled Launcher RPG-7

- Caliber – 40 mm
- Weight – 5.83 kg
- Length – 950 mm
- Effective range – 500 m
- Max. Range – 1000 m
- Compatibility – All standard RPG-7 rounds
- Muzzle velocity – 112-145 m/sc
- Life expectancy – 1000 launches



**RPG-7**

#### Equipment



**Projectile Carrying Backpack**



**Holographic Sight with/without magnifier (Optional)**



**Optical Sight (Optional)**



## Anti Tank Systems

**RPG-7** -Battle proven design assembled with modern technologies.



### Off-route Antitank Mine RD-7

- Weight – 32 kg
- Explosive Content - 17.5kg
- Caliber – 206 mm
- Range - 5 to 50 m
- Armor Penetration – 110mm
- Operating Temperature Range - (-40) to +60 C degrees
- Pierced Hole diameter – 120mm



RD-7

### Anti-tank Rocket Launcher PDM-1

- Caliber– 72.5 mm
- Length 700 mm
- Weight – 2.9kg
- Range, m 50 to 600
- Initial Speed of the Grenade m/sec -144
- Combat Unit Type – Fragmentation Elements
- Full Damage Radius – 24 m



PDM-1



## Under Barrel Grenade Launchers



### **GP-25**

Suitable for attaching to:  
7,62 mm AK-47, AKM, AKMS  
5,45 mm AK-74, AKS-74  
Caliber - 40 mm  
Rounds – VOG-25, VOG-25P  
Maximum firing range – 400 m  
Weight – 1,3 kg



### **UBGL**

Suitable for attaching to:  
5,56 mm M-4 and M-16  
Caliber - 40 mm  
Rounds – 40X46 mm grenades  
Maximum firing range – 400 m  
Weight – 1,7 kg



### **AG-40**

Suitable for attaching to:  
5,56 mm M-4 and M-16  
5,45 mm AK-74, AKS-74  
7,62 mm AK-47, AKM, AKMS  
Caliber - 40 mm  
Rounds – 40X46 mm grenades  
Maximum firing range – 400 m  
Weight – 1,7 kg



## Other Military Products





# Suppressors



## Technical Specification

Firearms type – M-4  
Weight – 550 g  
Caliber – 5,56 mm  
Length – 225 mm  
Diameter – 38 mm  
Fire Recourse – 2500  
Sound Reduction – 85 db



## Technical Specification

Firearms type - AK-74  
Weight – 710 g  
Caliber – 5,45 mm  
Length – 238 mm  
Diameter – 38 mm  
Fire Recourse – 2000-2500  
Sound Reduction – 85 db



## Technical Specification

Firearms type – DT SRS  
Weight – 1,74 kg  
Caliber – 8,6 mm (.338)  
Length – 331 mm  
Diameter – 47 mm  
Fire Recourse – 2000  
Sound Reduction – 85 db



## Other Products



**Blank adapters for  
cartridge firearms**



**Rubber track shoe production for tracked  
military vehicles**



## Other Products



Military Tents



Armored vehicle-launched bridge (AVLB)





## Other Products



**Watchtower – 3 m**



**Watchtowers – 12 m**



**Antennas**



## Other Products



**Military Beds**



**Anti-Riot**

**Fences**



**Safe Boxes**

# Design and Production Capabilities

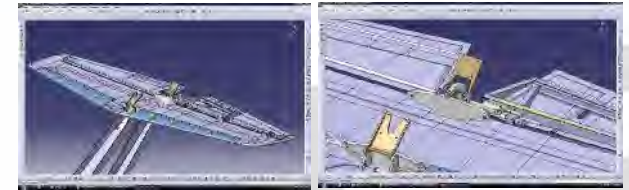






## Design and Production Capabilities

The company successfully applies modern technology and engineering techniques, using the CAD/CAM/CAE design process, CATIA v5, Mechanical Desktop, Nastran, Patran, and other advanced programming. Delta is committed to continual upgrade of its IT systems with installation of the most modern computer programs.



### Machining

- Machining of metal parts 3&4 axis CNC milling and turning machines
- Machines are equipped with modern software with digital control system, enabling to produce the parts of different sizes, configuration, surfaces with great accuracy and cleanliness
- Delta conducts machining works by using modern 5 axis CNC turning and milling machines



### Composite Materials, Sheet Metal and Welding, Non-Metal Items (rubber, glue, plastic), Heat Treatment & Coating







# Thank You!

STC DELTA

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