

2021



CATALOGUE







## ABOUT US

The Holding Corporation 'Krušik' a.d. is the name recognized worldwide among the users of the products of this sort. The Company has great tradition in manufacturing armament and military equipment. Krušik has sold more than 14mil items and exported to more than 70 countries of the world within past 80 years of its existence, therefore, it is ranked among leading armament manufacturers in this part of Europe. Throughout the years, Krušik has participating on more than 300 manifestations in the country and abroad. Strategic partners of Krušik are Serbian Army and Yugoimport-SDPR.

## FIELD OF ACTIVITY

- PRODUCTION OF ARMAMENT AND MILITARY EQUIPMENT
- OVERHAUL OF ARMAMENT AND MILITARY EQUIPMENT
- TECHNOLOGY TRANSFERS AND ERECTION OF PLANTS
- MARKET ORIENTED PROGRAMS
- SERVICES: DISASSEMBLING AND SAFE DESTRUCTION OF WAR DEVICES, SHELF-LIFE EXPIRED PRODUCTS, METAL MANUFACTURING, HEAT TREATMENTS, PROTECTIVE COATINGS

## CONTACT

**Acting General Manager: Jovanka Andrić**  
**Adress: 59 Vladike Nikolaja, Valjevo, Serbia**  
**Phone:+ 381 14 221 593**  
**Fax:+ 381 14 220 516**  
**E-mail: [direktor@krusik.rs](mailto:direktor@krusik.rs)**  
**Web site: [www.krusik.rs](http://www.krusik.rs)**



MORTAR SHELLS



AIRCRAFT ROCKETS



UNGUIDED ROCKETS



GUIDED ROCKETS

# MILITARY PROGRAM





## **60 mm M73 HE MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 286 mm
- Mass of mortar shell with fuze ----- 1350 g
- Explosive charge-----trotyl (TNT)
- Mass of explosive charge ----- 250 g
- Fuze----- impact, superquick action, UT M68 P1
- Muzzle safety at lowest initial velocity ----- 8 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 60 mm Mortar, barrel length 650 mm:
  - Maximum range----- 2500 m
- Max. mean operating pressure in mortar ----- 392 bars
- Killing range ( 1 penetration / m<sup>2</sup> ) - radius ----- 10 m

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 12 cartons per wooden case
- Dimensions of wooden case ----- 553 x 429 x 223 mm
- Gross weight ----- 29 kg
- Volume of wooden case ----- 0,053 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

### **FUZE**

UT, M68P1





## **60 mm M73P3 HE MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 301 mm
- Mass of mortar shell with fuze ----- 1350 g
- Explosive charge----- trotyl (TNT)
- Mass of explosive charge ----- 250 g
- Fuze-----impact, superquick action UT, M88 P1
- Muzzle safety at lowest initial velocity ----- 70 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range ----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 60 mm Mortar, barrel length 650 mm:
  - Maximum range----- 2500 m
- Max. mean operating pressure in mortar ----- 392 bars
- Killing range ( 1 penetration / m<sup>2</sup> ) - radius ----- 10 m

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 12 cartons per wooden case
- Dimensions of wooden case ----- 553 x 429 x 223 mm
- Gross weight ----- 29 kg
- Volume of wooden case ----- 0,053 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

### **FUZE UT, M88P1**





## **60mm Mk10 HE MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 410 mm
- Mass of mortar shell with fuze ----- 2100 g
- Explosive charge-----hexolite (RDX/ TNT) or trotyl (TNT)
- Mass of explosive charge ----- 380 g
- Fuze-----impact, superquick action UT, M88 P1
- Muzzle safety at lowest initial velocity ----- 70 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -46°C to +63°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 60 mm Mortar, barrel length 1200 mm:
  - Maximum range ----- 5035 m
- Max. mean operating pressure in mortar ----- 618 bars
- Killing range ( 1 penetration / m<sup>2</sup> ) - radius ----- 14 m

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 8 cartons per wooden case
- Dimensions of wooden case ----- 500 x 350 x 200 mm
- Gross weight ----- 29 kg
- Volume of wooden case ----- 0,036 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

### **FUZE**

UT, M88P1





## **60mm Mk10P1 HE MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 410 mm
- Mass of mortar shell with fuze ----- 2100 g
- Explosive charge----- hexolite (RDX/ TNT) or trotyl (TNT)
- Mass of explosive charge ----- 380 g
- Fuze----- impact , superquick, delay action UTU, M93-N
- Muzzle safety at lowest initial velocity ----- 50 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -46°C to +63°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 60 mm Mortar, barrel length 1200 mm:
  - Maximum range ----- 5035 m
- Max. mean operating pressure in mortar ----- 618 bars
- Killing range ( 1 penetration / m<sup>2</sup> ) - radius ----- 14 m

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 8 cartons per wooden case
- Dimensions of wooden case ----- 500 x 350 x 200 mm
- Gross weight ----- 29 kg
- Volume of wooden case ----- 0,036 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

### **FUZE**

UTU, M93-N





## **60mm M73P1**

# **SMOKE MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 286 mm
- Mass of mortar shell with fuze ----- 1350 g
- Weight of smoke charge ----- 220 g
- Type of smoke charge -----white phosphorus
- Fuze----- impact, superquick action UT, M68 P1
- Muzzle safety at lowest initial velocity ----- 8 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 60 mm Mortar, barrel length 650 mm:
  - Maximum range ----- 2500 m
- Max. mean operating pressure in mortar ----- 392 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 12 cartons per wooden case
- Dimensions of wooden case ----- 553 x 429 x 223 mm
- Gross weight ----- 29 kg
- Volume of wooden case ----- 0,053 m<sup>3</sup>
- UN No.-----0246
- Hazard class-----1.3H

### **FUZE**

UT, M68P1





## **60mmMk10**

# **SMOKE MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 410 mm
- Mass of mortar shell with fuze ----- 2100 g
- Weight of smoke charge ----- 270 g
- Type of smoke charge -----white phosphorus
- Fuze----- impact, superquick action UT, M88 P1
- Muzzle safety at lowest initial velocity ----- 70 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -46°C to +63°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 60 mm Mortar, barrel length 1200 mm:
  - Maximum range ----- 5035 m
- Max. mean operating pressure in mortar ----- 618 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 8 cartons per wooden case
- Dimensions of wooden case ----- 500 x 350 x 200 mm
- Gross weight ----- 29 kg
- Volume of wooden case ----- 0,036 m<sup>3</sup>
- UN No.-----0246
- Hazard class-----1.3H

### **FUZE** UT, M88P1





## **60mm M67**

# **ILLUMINATING MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 330 mm
- Mass of mortar shell with fuze ----- 1270 g
- Mass of illuminating candle ----- 165 g
- Fuze----- pyrotechnic, time, TP M67
- Illuminating power ----- 180.000 Cd for 30 s
- Mean rate of parachute descent with candle -----2.5 m/s
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 60 mm Mortar, barrel length 650 mm:
  - Maximum range ----- 2500 m
- Max mean operating pressure in mortar ----- 392 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 12 cartons per wooden case
- Dimensions of wooden case ----- 553 x 429 x 223 mm
- Gross weight ----- 29 kg
- Volume of wooden case ----- 0,053 m<sup>3</sup>
- UN No.-----0171
- Hazard class-----1.2G

### **FUZE**

TP, M67





## **60mm M91**

# **ILLUMINATING MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 467 mm
- Mass of mortar shell with fuze ----- 2100 g
- Mass of illuminating candle ----- 300 g
- Fuze----- pyrotechnic, time, TP M67 P2
- Illuminating power ----- 330.000 Cd for 30 s
- Mean rate of parachute descent with candle -----3.0 m/s
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 60 mm Mortar, barrel length 1200 mm:
  - Maximum range ----- 4500 m
- Max mean operating pressure in mortar ----- 618 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 8 cartons per wooden case
- Dimensions of wooden case ----- 561 x 364 x 222 mm
- Gross weight ----- 29 kg
- Volume of wooden case ----- 0,045 m<sup>3</sup>
- UN No.-----0171
- Hazard class-----1.2G

### **FUZE**

TP, M67P2





## 60mm Mk15

# ILLUMINATING MORTAR SHELL

### TECHNICAL DATA



- Length of shell with fuze ----- 520 mm
- Mass of mortar shell with fuze ----- 2100 g
- Mass of illuminating candle ----- 300 g
- Fuze----- electronic, time, ETSQ M365
- Illuminating power ----- 330.000 Cd for 30 s
- Mean rate of parachute descent with candle -----2.5 m/s
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.

### BALLISTIC DATA

- When using 60 mm Mortar, barrel length 1200 mm:
  - Maximum range ----- 4500 m
- Max mean operating pressure in mortar ----- 618 bars

The mortar shells can be fired from smooth bore mortar launchers.

### PACKING

- 1 complete shell per carton
- 8 cartons per wooden case
- Dimensions of wooden case ----- 595 x 355 x 203 mm
- Gross weight ----- 29 kg
- Volume of wooden case ----- 0,043 m<sup>3</sup>
- UN No.-----0171
- Hazard class-----1.2G

### FUZE

ETSQ, M365





## **81mm M72 HE MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 387 mm
- Mass of mortar shell with fuze ----- 3050 g
- Explosive charge-----trotyl (TNT)
- Mass of explosive charge ----- 650 g
- Fuze----- impact, superquick action UT, M68 P1
- Muzzle safety at lowest initial velocity ----- 8 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 81mm Mortar, barrel length 1150 mm:
  - Maximum range ----- 4900 m
- Max mean operating pressure in mortar ----- 618 bars
- Killing range ( 1 penetration / m<sup>2</sup> ) - radius ----- 14 m

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case ----- 607 x 480 x 174 mm
- Gross weight ----- 29 kg
- Volume of wooden case ----- 0,051 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

### **FUZE**

UT, M68P1





# **81mm M72P3 HE MORTAR SHELL**

## **TECHNICAL DATA**

- Length of shell with fuze ----- 400 mm
- Mass of mortar shell with fuze ----- 3050 g
- Explosive charge----- trotyl (TNT)
- Mass of explosive charge ----- 650 g
- Fuze----- impact, superquick action UT, M88 P1
- Muzzle safety at lowest initial velocity ----- 70 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



## **BALLISTIC DATA**

- When using 81mm Mortar, barrel length 1150 mm:
  - Maximum range ----- 4900 m
- Max mean operating pressure in mortar ----- 618 bars
- Killing range ( 1 penetration / m<sup>2</sup> ) - radius ----- 14 m

**The mortar shells can be fired from smooth bore mortar launchers.**

## **PACKING**

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case ----- 607 x 480 x 174 mm
- Gross weight ----- 29 kg
- Volume of wooden case ----- 0,051 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

## **FUZE**

UT, M88P1





# **81 mm Mk11 HE MORTAR SHELL**

## **TECHNICAL DATA**

- Length of shell with fuze ----- 478 mm
- Mass of mortar shell with fuze ----- 4100 g
- Explosive charge-----hexolite (RDX/ TNT) or trotyl (TNT)
- Mass of explosive charge ----- 900 g
- Fuze----- impact, superquick action, UT M88 P1
- Muzzle safety at lowest initial velocity ----- 70 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -46°C to +63°C
- High safety during transportation, handling and parachuting.



## **BALLISTIC DATA**

- When using 81mm Mortar, barrel length 1450 mm:
  - Maximum range ----- 6500 m
- Max mean operating pressure in mortar ----- 618 bars
- Killing range ( 1 penetration / m<sup>2</sup> ) - radius ----- 18 m

**The mortar shells can be fired from smooth bore mortar launchers.**

## **PACKING**

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case----- 582 x 557 x 154 mm
- Gross weight ----- 34 kg
- Volume of wooden case ----- 0,050 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

## **FUZE UT, M88P1**





# **81 mm Mk11P1 HE MORTAR SHELL**

## **TECHNICAL DATA**



- Length of shell with fuze ----- 478 mm
- Mass of mortar shell with fuze ----- 4100 g
- Explosive charge----- hexolite (RDX/ TNT) or trotyl (TNT)
- Mass of explosive charge ----- 900 g
- Fuze----- impact, superquick, delay action, UTU M93-N
- Muzzle safety at lowest initial velocity ----- 50 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -46°C to +63°C
- High safety during transportation, handling and parachuting.

## **BALLISTIC DATA**

- When using 81mm Mortar, barrel length 1450 mm:
  - Maximum range ----- 6500 m
- Max mean operating pressure in mortar ----- 618 bars
- Killing range ( 1 penetration / m<sup>2</sup> ) - radius ----- 18 m

**The mortar shells can be fired from smooth bore mortar launchers.**

## **PACKING**

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case ----- 582 x 557 x 154 mm
- Gross weight ----- 34 kg
- Volume of wooden case ----- 0,050 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

## **FUZE**

UTU, M93-N





## **81 mm M72P1** **SMOKE MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 387 mm
- Mass of mortar shell with fuze ----- 3050 g
- Weight of smoke charge ----- 600 g
- Type of smoke charge -----white phosphorus
- Fuze----- impact, superquick action, UT M68 P1
- Muzzle safety at lowest initial velocity ----- 8 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 81mm Mortar, barrel length 1150 mm:
  - Maximum range ----- 4900 m
- Max mean operating pressure in mortar ----- 618 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case----- 607 x 480 x 174 mm
- Gross weight ----- 29 kg
- Volume of wooden case -----0,051m<sup>3</sup>
- UN No.-----0246
- Hazard class-----1.3H

### **FUZE**

UT, M68P1





# 81 mm Mk11 SMOKE MORTAR SHELL

## TECHNICAL DATA

- Length of shell with fuze ----- 478 mm
- Mass of mortar shell with fuze ----- 4100 g
- Weight of smoke charge (WP) ----- 700 g
- Type of smoke charge ----- white phosphorus
- Fuze ----- impact, superquick action, UT M88 P1
- Muzzle safety at lowest initial velocity ----- 70 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range ----- -46°C to +63°C
- High safety during transportation, handling and parachuting.



## BALLISTIC DATA

- When using 81mm Mortar, barrel length 1450 mm:
  - Maximum range ----- 6500 m
- Max mean operating pressure in mortar ----- 618 bars

The mortar shells can be fired from smooth bore mortar launchers.

## PACKING

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case ----- 582 x 557 x 154 mm
- Gross weight ----- 34 kg
- Volume of wooden case ----- 0,050m<sup>3</sup>
- UN No. ----- 0246
- Hazard class ----- 1.3H

## FUZE UT, M88P1





## **81 mm M67**

# **ILLUMINATING MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 410 mm
- Mass of mortar shell with fuze ----- 2950 g
- Shell charge weight ----- 420 g
- Fuze----- pyrotechnic, time, TP M67
- Illuminating power ----- 500.000 Cd for 40 s
- Mean rate of parachute descent with candle ----- 2.4 m/s
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 81mm Mortar, barrel length 1150 mm:
  - Maximum range ----- 3400 m
- Max mean operating pressure in mortar ----- 422 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case ----- 607 x 518 x 174 mm
- Gross weight ----- 29 kg
- Volume of wooden case ----- 0,055m<sup>3</sup>
- UN No.-----0171
- Hazard class-----1.2G

### **FUZE**

TP, M67





## **81 mm Mk11**

# **ILLUMINATING MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 530 mm
- Mass of mortar shell with fuze ----- 4200 g
- Shell charge weight ----- 700 g
- Fuze-----pyrotechnic, time, TP M67P2
- Illuminating power ----- 750.000 Cd for 30 s
- Mean rate of parachute descent with candle ----- 3.0 m/s
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 81mm Mortar, barrel length 1450 mm:
  - Maximum range ----- 5480 m
- Max mean operating pressure in mortar ----- 618 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case ----- 630 x 565 x 154 mm
- Gross weight ----- 37 kg
- Volume of wooden case ----- 0,055 m<sup>3</sup>
- UN No.-----0171
- Hazard class-----1.2G

### **FUZE**

TP, M67P2





## **81 mm Mk15**

# **ILLUMINATING MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 575 mm
- Mass of mortar shell with fuze ----- 4200 g
- Shell charge weight ----- 700 g
- Fuze----- electronic, time, ETSQ M365
- Illuminating power ----- 750.000 Cd for 30 s
- Mean rate of parachute descent with candle ----- 3.0 m/s
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -40°C to +63°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 81mm Mortar, barrel length 1450 mm:
  - Maximum range ----- 5480 m
- Max mean operating pressure in mortar ----- 618 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case ----- 686 x 557 x 154 mm
- Gross weight ----- 38kg
- Volume of wooden case ----- 0,059m<sup>3</sup>
- UN No.-----0171
- Hazard class-----1.2G

### **FUZE**

ETSQ, M365





## **82 mm M74 HE MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 375 mm
- Mass of mortar shell with fuze ----- 3050 g
- Explosive charge-----trotyl (TNT)
- Mass of explosive charge ----- 650 g
- Fuze----- impact, superquick action, UT M68 P1
- Muzzle safety at lowest initial velocity ----- 8 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 82mm Mortar, barrel length 1150 mm:
  - Maximum range ----- 4900 m
- Max mean operating pressure in mortar ----- 618 bars
- Killing range ( 1 penetration / m<sup>2</sup> ) - radius ----- 14 m

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case ----- 607 x 480 x 174 mm
- Gross weight ----- 29 kg
- Volume of wooden case ----- 0,051 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

### **FUZE**

UT, M68P1





## **82 mm Mk11 HE MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 478 mm
- Mass of mortar shell with fuze ----- 4100 g
- Explosive charge-----hexolite (RDX/ TNT) or trotyl (TNT)
- Mass of explosive charge ----- 900 g
- Fuze----- impact, superquick action, UT M88 P1
- Muzzle safety at lowest initial velocity ----- 70 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -46°C do +63°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 82mm Mortar, barrel length 1450 mm:
  - Maximum range ----- 6500 m
- Max mean operating pressure in mortar ----- 618 bars
- Killing range ( 1 penetration / m<sup>2</sup> ) - radius ----- 18 m

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case----- 582 x 557 x 154 mm
- Gross weight ----- 34 kg
- Volume of wooden case ----- 0,050 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

### **FUZE**

UT, M88P1





# **82 mm Mk11P1** **HE MORTAR SHELL**

## **TECHNICAL DATA**

- Length of shell with fuze ----- 478 mm
- Mass of mortar shell with fuze ----- 4100 g
- Explosive charge----- hexolite (RDX/ TNT) or trotyl (TNT)
- Mass of explosive charge ----- 900 g
- Fuze----- impact , superquick, delay action UTU, M93-N
- Muzzle safety at lowest initial velocity ----- 50 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -46°C to +63°C
- High safety during transportation, handling and parachuting.



## **BALLISTIC DATA**

- When using 81mm Mortar, barrel length 1450 mm:
  - Maximum range ----- 6500 m
- Max mean operating pressure in mortar ----- 618 bars
- Killing range ( 1 penetration / m<sup>2</sup> ) - radius ----- 18 m

**The mortar shells can be fired from smooth bore mortar launchers.**

## **PACKING**

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case----- 582 x 557 x 154 mm
- Gross weight ----- 34 kg
- Volume of wooden case ----- 0,050 m<sup>3</sup>
- UN No.----- 0321
- Hazard class----- 1.2E

## **FUZE**

UTU, M93-N





## **82 mm M74P1**

# **SMOKE MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 375 mm
- Mass of mortar shell with fuze ----- 3050 g
- Weight of smoke charge ----- 600 g
- Type of smoke charge -----white phosphorus
- Fuze----- impact, superquick action UT, M68 P1
- Muzzle safety at lowest initial velocity ----- 8 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.

### **BALLISTIC DATA**

- When using 82mm Mortar, barrel length 1150 mm:
  - Maximum range ----- 4900 m
- Max mean operating pressure in mortar ----- 618 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case----- 607 x 480 x 174 mm
- Gross weight ----- 29 kg
- Volume of wooden case -----0,051 m<sup>3</sup>
- UN No.-----0246
- Hazard class-----1.3H

### **FUZE**

UT, M68P1





## **82 mm Mk11**

# **SMOKE MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 478 mm
- Mass of mortar shell with fuze ----- 4100 g
- Weight of smoke charge----- 700 g
- Type of smoke charge -----white phosphorus
- Fuze----- impact, superquick action, UT M88 P1
- Muzzle safety at lowest initial velocity ----- 70 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -46°C to +63°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 81mm Mortar, barrel length 1450 mm:
  - Maximum range ----- 6500 m
- Max mean operating pressure in mortar ----- 618 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case ----- 582 x 557 x 154 mm
- Gross weight ----- 34 kg
- Volume of wooden case ----- 0,050 m<sup>3</sup>
- UN No.-----0246
- Hazard class-----1.3H

### **FUZE** UT, M88P1





## **82 mm M67**

# **ILLUMINATING MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 410 mm
- Mass of mortar shell with fuze ----- 2950 g
- Shell charge weight ----- 420 g
- Fuze----- pyrotechnic, time, TP M67
- Illuminating power ----- 500.000 Cd for 30 s
- Mean rate of parachute descent with candle ----- 2.4 m/s
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 82mm Mortar, barrel length 1150 mm:
  - Maximum range ----- 3400 m
- Max mean operating pressure in mortar ----- 422 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case ----- 607 x 518 x 174 mm
- Gross weight ----- 29 kg
- Volume of wooden case ----- 0,055m<sup>3</sup>
- UN No.----- 0171
- Hazard class----- 1.2G

### **FUZE**

TP, M67





## **82 mm Mk11**

# **ILLUMINATING MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 530 mm
- Mass of mortar shell with fuze ----- 4200 g
- Shell charge weight ----- 700 g
- Fuze----- pyrotechnic, time, TP M67 P2
- Illuminating power ----- 750.000 Cd for 30 s
- Mean rate of parachute descent with candle ----- 3.0 m/s
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 82mm Mortar, barrel length 1450 mm:
  - Maximum range ----- 5480 m
- Max mean operating pressure in mortar ----- 618 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case ----- 630 x 565 x 154 mm
- Gross weight ----- 37 kg
- Volume of wooden case ----- 0,055 m<sup>3</sup>
- UN No.----- 0171
- Hazard class----- 1.2G

### **FUZE**

TP, M67 P2





# 82 mm Mk15 ILLUMINATING MORTAR SHELL

## TECHNICAL DATA

- Length of shell with fuze ----- 575 mm
- Mass of mortar shell with fuze ----- 4200 g
- Shell charge weight ----- 700 g
- Fuze----- electronic, time, ETSQ M365
- Illuminating power ----- 750.000 Cd for 30 s
- Mean rate of parachute descent with candle ----- 3.0 m/s
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -40°C to +63°C
- High safety during transportation, handling and parachuting.



## BALLISTIC DATA

- When using 82mm Mortar, barrel length 1450 mm:
  - Maximum range ----- 5480 m
- Max mean operating pressure in mortar ----- 618 bars

The mortar shells can be fired from smooth bore mortar launchers.

## PACKING

- 1 complete shell per carton
- 5 cartons per wooden case
- Dimensions of wooden case ----- 686 x 557 x 154 mm
- Gross weight ----- 38kg
- Volume of wooden case ----- 0,059 m<sup>3</sup>
- UN No.----- 0171
- Hazard class----- 1.2G

## FUZE ETSQ, M365





# **120 mm M62P8**

## **HE MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 606 mm
- Mass of mortar shell with fuze ----- 12600 g
- Explosive charge-----TNT
- Mass of explosive charge ----- 2400 g
- Fuze----- impact , superquick, delay action, UTU M93 P1
- Muzzle safety at lowest initial velocity ----- 50 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 120 mm Mortar, barrel length 1500 mm:
  - Maximum range ----- 6555 m
- Max mean operating pressure in mortar ----- 922 bars
- Killing range (1 penetration/m<sup>2</sup>) radius ----- 18 m

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 2 cartons per wooden case
- Dimensions of wooden case----- 738 x 352 x 211 mm
- Gross weight ----- 38 kg
- Volume of wooden case ----- 0,055 m<sup>3</sup>
- UN No.----- 0321
- Hazard class----- 1.2E

### **FUZE**

UTU, M93 P1





# 120 mm M62P9 HE MORTAR SHELL

## TECHNICAL DATA

- Length of shell with fuze ----- 606 mm
- Mass of mortar shell with fuze ----- 12600 g
- Explosive charge ----- TNT
- Mass of explosive charge ----- 2400 g
- Fuze----- impact, superquick, UT M88 P2
- Muzzle safety at lowest initial velocity ----- 70 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



## BALLISTIC DATA

- When using 120 mm Mortar, barrel length 1500 mm:
  - Maximum range ----- 6555 m
- Max mean operating pressure in mortar ----- 922 bars
- Killing range (1 penetration/m<sup>2</sup>) radius -----18 m

The mortar shells can be fired from smooth bore mortar launchers.

## PACKING

- 1 complete shell per carton
- 2 cartons per wooden case
- Dimensions of wooden case -----738 x 352 x 211 mm
- Gross weight ----- 38 kg
- Volume of wooden case -----0,055 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

## FUZE UT, M88 P2





# **120 mm M62P10 HE MORTAR SHELL**

## **TECHNICAL DATA**

- Length of shell with fuze ----- 593 mm
- Mass of mortar shell with fuze ----- 12600 g
- Explosive charge ----- TNT
- Mass of explosive charge ----- 2400 g
- Fuze----- impact, superquick, UT M68 P1
- Muzzle safety at lowest initial velocity ----- 8 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



## **BALLISTIC DATA**

- When using 120 mm Mortar, barrel length 1500 mm:
  - Maximum range ----- 6555 m
- Max mean operating pressure in mortar ----- 922 bars
- Killing range (1 penetration/m<sup>2</sup>) radius ----- 18 m

**The mortar shells can be fired from smooth bore mortar launchers.**

## **PACKING**

- 1 complete shell per carton
- 2 cartons per wooden case
- Dimensions of wooden case -----738 x 352 x 211 mm
- Gross weight ----- 38 kg
- Volume of wooden case -----0,055 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

## **FUZE UT, M68P1**





# **120 mm Mk12 HE MORTAR SHELL**

## **TECHNICAL DATA**

- Length of shell with fuze ----- 807 mm
- Mass of mortar shell with fuze ----- 14800 g
- Explosive charge----- hexolite (RDX/ TNT) or trotyl (TNT)
- Mass of explosive charge ----- 3100 g
- Fuze----- impact, superquick, UT M88 P2
- Muzzle safety at lowest initial velocity is ----- 70 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



## **BALLISTIC DATA**

- When using 120 mm Mortar, barrel length 1500 mm:
  - Maximum range ----- 7400 m
- Max mean operating pressure in mortar ----- 922 bars
- Killing range (1 penetration/m<sup>2</sup>) radius ----- 24 m

**The mortar shells can be fired from smooth bore mortar launchers.**

## **PACKING**

- 1 complete shell per carton
- 2 cartons per wooden case
- Dimensions of wooden case -----943 x 352 x 191 mm
- Gross weight ----- 42 kg
- Volume of wooden case -----0,063 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

## **FUZE**

UT, M88P2





# 120 mm Mk12- L HE MORTAR SHELL

## TECHNICAL DATA

- Length of shell with fuze ----- 807 mm
- Mass of mortar shell with fuze ----- 14800 g
- Explosive charge----- hexolite (RDX/ TNT) or trotyl (TNT)
- Mass of explosive charge ----- 3100 g
- Fuze----- impact, superquick action, UT M88 P2
- Muzzle safety at lowest initial velocity ----- 70 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



## BALLISTIC DATA

- When using 120 mm Mortar, barrel length 1900 mm:
  - Maximum range ----- 9400 m
- Max mean operating pressure in mortar -----1400 bars
- Killing range (1 penetration/m<sup>2</sup>) radius -----24 m

The mortar shells can be fired from smooth bore mortar launchers.

## PACKING

- 1 complete shell per carton
- 2 cartons per wooden case
- Dimensions of wooden case -----943 x 352 x 191 mm
- Gross weight ----- 42 kg
- Volume of wooden case -----0,063 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

## FUZE

UT, M88P2





# **120 mm Mk12P1** **HE MORTAR SHELL**

## **TECHNICAL DATA**

- Length of shell with fuze ----- 807 mm
- Mass of mortar shell with fuze ----- 14800 g
- Explosive charge ----- hexolite (RDX/ TNT) or trotyl (TNT)
- Mass of explosive charge ----- 3100 g
- Fuze----- impact , superquick, delay action, UTU M93 P1
- Muzzle safety at lowest initial velocity ----- 50 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to 50°C
- High safety during transportation, handling and parachuting.



## **BALLISTIC DATA**

- When using 120 mm Mortar, barrel length 1500 mm:
  - Maximum range ----- 7400 m
- Max mean operating pressure in mortar ----- 922 bars
- Killing range (1 penetration/m<sup>2</sup>) radius -----24 m

**The mortar shells can be fired from smooth bore mortar launchers.**

## **PACKING**

- 1 complete shell per carton
- 2 cartons per wooden case
- Dimensions of wooden case -----943 x 352 x 191 mm
- Gross weight ----- 42 kg
- Volume of wooden case -----0,063 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

## **FUZE**

UTU, M93 P1





# **120 mm Mk12P1-L** **HE MORTAR SHELL**

## **TECHNICAL DATA**

- Length of shell with fuze ----- 807 mm
- Mass of mortar shell with fuze ----- 14800 g
- Explosive charge-----hexolite (RDX/ TNT) or trotyl (TNT)
- Mass of explosive charge ----- 3100 g
- Fuze----- impact , superquick, delay action, UTU M93 P1
- Muzzle safety at lowest initial velocity ----- 50 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



## **BALLISTIC DATA**

- When using 120 mm Mortar, barrel length 1900 mm:
  - Maximum range ----- 9400 m
- Max mean operating pressure in mortar ----- 1400 bars
- Killing range (1 penetration/m<sup>2</sup>) radius -----24 m

**The mortar shells can be fired from smooth bore mortar launchers.**

## **PACKING**

- 1 complete shell per carton
- 2 cartons per wooden case
- Dimensions of wooden case -----943 x 352 x 191 mm
- Gross weight ----- 42 kg
- Volume of wooden case -----0,063 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

## **FUZE**

UTU, M93 P1





# **120 mm M64P3 SMOKE MORTAR SHELL**

## **TECHNICAL DATA**

- Length of shell with fuze ----- 606 mm
- Mass of mortar shell with fuze ----- 12600 g
- Weight of smoke charge ----- 2350 g
- Type of smoke charge ----- white phosphorus
- Fuze ----- impact, superquick, UT M88 P1
- Muzzle safety at lowest initial velocity ----- 70 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range ----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



## **BALLISTIC DATA**

- When using 120mm Mortar, barrel length 1500 mm:
  - Maximum range ----- 6555 m
- Max mean operating pressure in mortar ----- 922 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

## **PACKING**

- 1 complete shell per carton
- 2 cartons per wooden case
- Dimensions of wooden case ----- 738 x 352 x 171 mm
- Gross weight ----- 38 kg
- Volume of wooden case ----- 0,044 m<sup>3</sup>
- UN No. ----- 0246
- Hazard class ----- 1.3H

## **FUZE**

UT, M88P1





# **120 mm Mk12** **SMOKE MORTAR SHELL**

## **TECHNICAL DATA**

- Length of shell with fuze ----- 807 mm
- Mass of mortar shell with fuze ----- 14800 g
- Weight of smoke charge ----- 2350 g
- Fuze----- impact, superquick, UT M88 P1
- Muzzle safety at lowest initial velocity ----- 70 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range ----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



## **BALLISTIC DATA**

- When using 120mm Mortar, barrel length 1500 mm:
  - Maximum range ----- 7400 m
- Max mean operating pressure in mortar ----- 922 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

## **PACKING**

- 1 complete shell per carton
- 2 cartons per wooden case
- Dimensions of wooden case -----943 x 352 x 191 mm
- Gross weight ----- 42 kg
- Volume of wooden case -----0,063 m<sup>3</sup>
- UN No.-----0321
- Hazard class-----1.2E

## **FUZE**

UT, M88P1





# **120 mm M87P1** **ILLUMINATING MORTAR SHELL**

## **TECHNICAL DATA**

- Length of shell with fuze ----- 672 mm
- Mass of mortar shell with fuze ----- 10800 g
- Fuze-----pyrotechnic, time, TP M87
- Illuminating power ----- 1 000.000 Cd for 60 s
- Mean rate of parachute descent with candle ----- 3 m/s
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range ----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



## **BALLISTIC DATA**

- When using 120 mm Mortar, barrel length 1500 mm:
  - Maximum range ----- 5900 m
- Max mean operating pressure in mortar ----- 618 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

## **PACKING**

- 1 complete shell per carton
- 2 cartons per wooden case
- Dimensions of wooden case -----807 x 352 x 171 mm
- Gross weight ----- 36 kg
- Volume of wooden case -----0,049 m<sup>3</sup>
- UN No.-----0171
- Hazard class-----1.2G

## **FUZE**

TP, M87





# **120 mm Mk15**

## **ILLUMINATING MORTAR SHELL**

### **TECHNICAL DATA**

- Length of shell with fuze ----- 725 mm
- Mass of mortar shell with fuze ----- 10800 g
- Fuze----- electronic, time, ETSQ M365
- Illuminating power ----- 1 000.000 Cd for 60 s
- Mean rate of parachute descent with candle ----- 3 m/s
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to +50°C
- High safety during transportation, handling and parachuting.



### **BALLISTIC DATA**

- When using 120 mm Mortar, barrel length 1500 mm:
  - Maximum range ----- 5900 m
- Max mean operating pressure in mortar ----- 618 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

### **PACKING**

- 1 complete shell per carton
- 2 cartons per wooden box
- Box dimensions ----- 855 x 352 x 211 mm
- Gross weight ----- 36 kg
- Volume of wooden case ----- 36 m<sup>3</sup>
- UN No.-----0171
- Hazard class-----1.2G

### **FUZE**

ETSQ, M365





## **120 mm M62P10 - TB** **MORTAR SHELL**



### **TECHNICAL DATA**

- Length of shell with fuze ----- 593 mm
- Mass of mortar shell with fuze ----- 12600 g
- Explosive charge ----- THERMOBARIC
- Overpressure at 5m ----- 0,5 bar
- Mass of explosive charge ----- 2400 g
- Fuze----- impact, superquick action, UT M68 P1
- Muzzle safety at lowest initial velocity ----- 8 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to 50°C
- High safety during transportation, handling and parachuting.

### **BALLISTIC DATA**

- When using 120 mm Mortar, barrel length 1500 mm:
  - Maximum range ----- 6555 m
- Max mean operating pressure in mortar ----- 922 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

**FUZE**  
UT, M68P1





## **120 mm M62P10 - D - TB MORTAR SHELL**



### **TECHNICAL DATA**

- Length of shell with fuze ----- 590 mm
- Mass of mortar shell with fuze ----- 11300 g
- Explosive charge ----- THERMOBARIC
- Overpressure at 5m ----- 0,5 bar
- Mass of explosive charge ----- 2400 g
- Fuze ----- impact, superquick, UT M68 P1-D
- Safe operational temperature range ----- -30°C to 50°C
- High safety during transportation, handling and parachuting.



**FUZE**  
UT, M68P1-D





## **120 mm M62PX - D - TB** **MORTAR SHELL**



### **TECHNICAL DATA**

- Length of shell with fuze ----- 633 mm
- Mass of mortar shell with fuze ----- 11500 g
- Explosive charge ----- THERMOBARIC
- Mass of explosive charge ----- 2400 g
- Overpressure at 5 m ----- 0,5 bar
- Fuze----- proximity, superquick, MBU M18-D
- Safe operational temperature range----- -40°C to 63°C
- High safety during transportation, handling and parachuting.

**The mortar shells are used for firing from drone.**



**FUZE**

**MBU, M18**





## **120 mm M62PX - TB** **MORTAR SHELL**



### **TECHNICAL DATA**

- Length of shell with fuze ----- 633 mm
- Mass of mortar shell with fuze ----- 12600 g
- Explosive charge ----- THERMOBARIC
- Overpressure at 5m ----- 0,5 bar
- Mass of explosive charge ----- 2400 g
- Fuze ----- proximity, superquick, MBU M18
- Muzzle safety at lowest initial velocity ----- 100 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range ----- -30°C to 50°C
- High safety during transportation, handling and parachuting.

### **BALLISTIC DATA**

- When using 120 mm Mortar, barrel length 1500 mm:
  - Maximum range ----- 6555 m
  - Max mean operating pressure in mortar ----- 922 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

**FUZE**  
MBU, M18





## **120 mm Mk12PX - TB** **MORTAR SHELL**



### **TECHNICAL DATA**

- Length of shell with fuze ----- 835 mm
- Mass of mortar shell with fuze ----- 14800 g
- Explosive charge-----THERMOBARIC
- Overpressure at 7m ----- 0,5 bar
- Mass of explosive charge ----- 3100 g
- Fuze----- proximity, superquick, MBU M18
- Muzzle safety at lowest initial velocity -----100 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to 50°C
- High safety during transportation, handling and parachuting.

### **BALLISTIC DATA**

- When using 120 mm Mortar, barrel length 1500 mm:
  - Maximum range ----- 7500 m
  - Max mean operating pressure in mortar ----- 922 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

**FUZE**  
**MBU, M18**





## **120 mm Mk12 - TB** **MORTAR SHELL**



### **TECHNICAL DATA**

- Length of shell with fuze ----- 807 mm
- Mass of mortar shell with fuze ----- 14800 g
- Explosive charge ----- THERMOBARIC
- Overpressure at 7m ----- 0,5 bar
- Mass of explosive charge ----- 3100 g
- Fuze----- impact, superquick, UT M88 P2
- Muzzle safety at lowest initial velocity ----- 70 m
- Shell is completed with ignition cartridge and increment charges.
- Safe operational temperature range----- -30°C to 50°C
- High safety during transportation, handling and parachuting.

### **BALLISTIC DATA**

- When using 120 mm Mortar, barrel length 1500 mm:
  - Maximum range ----- 7500 m
- Max mean operating pressure in mortar ----- 922 bars

**The mortar shells can be fired from smooth bore mortar launchers.**

### **FUZE**

UT, M88P2







## **VZ 80mm, M16 (S-8 KOM)** **AIRCRAFT ROCKET**

The VZ 80mm, M16 (S-8 KOM) unguided aircraft rocket is with hollow-charge fragmentation warhead and designed for destruction of ground armored and unarmored targets, such as tanks, missile launchers as well as enemy troops.



### **TECHNICAL DATA**

Caliber-----	80 mm
Warhead explosive mass -----	1,1 kg
Rocket mass-----	11,1 kg
Rocket length-----	1537 mm
Rocket penetration under the angle of 30° to the normal---	min.350 mm
Temperature range of use-----	- 60°C to + 60°C
Fuze - impact, superquick, inertia type - piezoelectric upper PIEZO GENERATOR ПГ, M16 lower UTI-PE M15	

### **PACKING**

4 rockets in a wooden case	
Case dimension-----	1795 x 330 x 350 mm
Case gross weight -----	72 kg
Case volume-----	0,17m <sup>3</sup>
UN no.-----	0180
Hazard class-----	1.1F

#### **FUZE**

**PIEZO GENERATOR**



#### **FUZE**

**UTI-PE M15**





## **BR-1-57**

# **AIRCRAFT ROCKET**

The aircraft rocket BR- 1- 57 is used for air assaults on targets such as: aircrafts, transporters, light armoured or non-armoured targets and live force.

### **TECHNICAL DATA**

Rocket caliber-----	57 mm
Rocket length with fuze-----	868 mm
Rocket mass -----	3,96 kg
Warhead mass (without fuze)-----	0,815 kg
Explosive charge mass-----	0.285 kg
Temperature range of use-----	- 60°C to + 50°C
Fuze-----	impact, superquick, inertia action UTI-1

### **PACKING**

12 rockets in a wooden case	
Case dimension-----	1069 x 395 x 285 mm
Case gross weight -----	72 kg
Case volume-----	0,2 m <sup>3</sup>
UN no.-----	0295
Hazard class-----	1.2F

### **FUZE**

UTI-1





## **BR-2-57** **AIRCRAFT ROCKET**

The aircraft rocket BR- 2- 57 is used to destroy armored ground targets, tanks, self- propelled artillery, armored vehicles, armored personnel carriers etc. The rocket is completed with impact inertia UTI-2 fuze. It has hollow charge effect.

### **TECHNICAL DATA**

Caliber-----	57 mm
Rocket length with fuze -----	853 mm
Rocket mass -----	3,64kg
Thickness of penetrating armor at rocket strike under the angle 30° from the vertical line-----	130 mm
Temperature range of use -----	- 60°C to + 50°C

### **PACKING**

12 rockets in a wooden case	
Case dimension-----	1069 x 935 x 285 mm
Case gross weight -----	69 kg
Case volume-----	0,12 m <sup>3</sup>
UN no.-----	0295
Hazard class-----	1.2F

### **FUZE**

UTI-2





## **BR-20-57**

# **AIRCRAFT ROCKET**

The aircraft rocket BR- 20- 57 is a rocket of combined hollow-charge and fragmentation effect, therefore, with multiple employment advantages, completed with the impact fuze UTI-2 with supequick-inertia action.

### **TECHNICAL DATA**

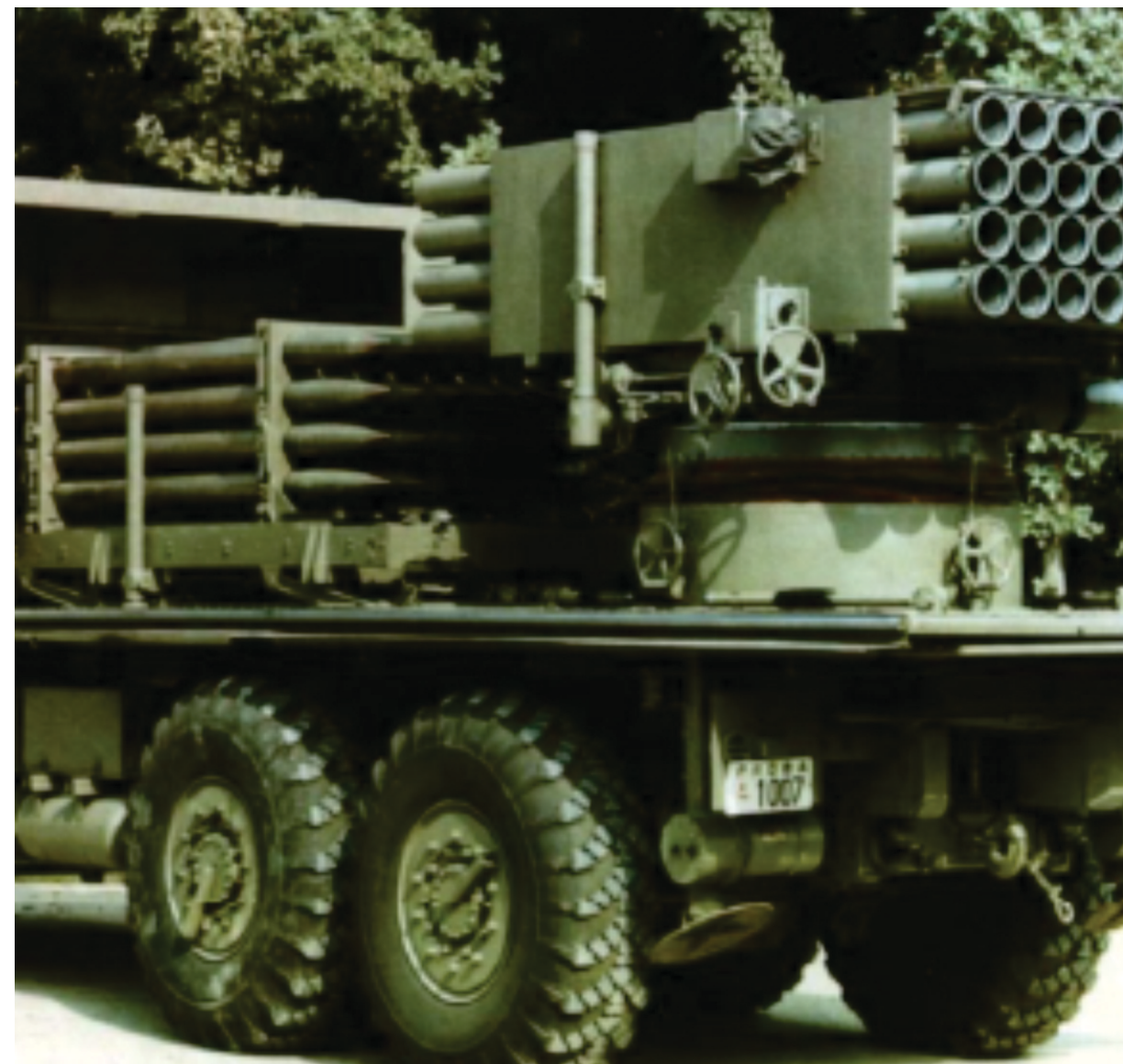
Rocket caliber-----	57 mm
Rocket mass-----	4.5 kg
Rocket length with fuze-----	991 mm
Explosive charge mass-----	0.32 kg
Penetration-----	160mm
Temperature range of use -----	- 60°C to + 50°C

### **PACKING**

8 rockets in a wooden case	
Case dimension-----	1100 x 443 x 250 mm
Case gross weight -----	64 kg
Case volume-----	0,12m <sup>3</sup>
UN no.-----	0180
Hazard class-----	1.1F

### **FUZE** **UTI-2P1**







## **128 mm "PLAMEN A" M63** **ARTILLERY ROCKET**

The unguided rocket 'PLAMEN A' is designed to inflict operational and powerful strikes on manpower, lightly armored enemy vehicles, to destruct command posts, communication centers, airports and military industrial infrastructure.



### **TECHNICAL DATA**

Maximum range-----	8600 m
Caliber-----	128 mm
Rocket length with the fuze-----	837 mm
Rocket mass-----	23,34 kg
Explosive charge mass-----	2,35 kg
Fuze - impact, superquick, inertia type -----	UTI M84
Temperature range of use-----	- 30°C to + 50°C

### **PACKING**

2 rockets in a wooden case	
Case dimension-----	1070 x 370 x 215 mm
Case gross weight -----	59 kg
Case volume-----	0.09 m <sup>3</sup>
UN no.-----	0295
Hazard class-----	1.2F

### **FUZE**

UTI, M84





## **128 mm "PLAMEN D" M08** **ARTILLERY ROCKET**

The unguided rocket 'PLAMEN D', M08 is designed to inflict operational and powerful strikes on manpower, lightly armored enemy vehicles, to destruct command posts, communication centers, airports and military industrial infrastructure.



### **TECHNICAL DATA**

Maximum range-----	12700 m
Caliber-----	128 mm
Length-----	975 mm
Rocket mass-----	25,67 kg
Explosive charge mass-----	2,95 kg
Fuze - impact, superquick, inertia type-----	UTI M84
Temperature range of use-----	- 30°C to + 50°C

### **PACKING**

2 rockets in a wooden case	
Case dimension-----	1081 x 370 x 215 mm
Case gross weight -----	69 kg
Case volume-----	0.08m <sup>3</sup>
UN no.-----	0295
Hazard class-----	1.2F

### **FUZE**

UTI, M84





## **122 mm “GRAD 2000” ARTILLERY ROCKET**

The artillery rocket intended for impact, sudden and quick fire assaults on the surface targets or below the ground level. It has great efficiency against all types of targets: motor cars, non-armored and armored vehicles.

### **TECHNICAL DATA**

Caliber	-----	122 mm
Length	-----	2875 mm
Total mass	-----	69 kg
Mass of warhead with fuze	-----	19,1 kg
Charge mass	-----	20,15 kg
Motor total impulse	-----	62250 Ns
Motor specific impulse	-----	2280 Ns
Temperature range of use	-----	- 30°C to + 50°C
Optimal angle of elevation	-----	55°
Range	-----	40 km
Fuze - upper impact mechanical with superquick and delay action		MRV-U

### **PACKING**

1 rocket in a wooden case		
Case dimension	-----	2900 x 285 x 225 mm
Case gross weight	-----	101kg
Case volume	-----	0.21 m <sup>3</sup>
UN no.	-----	0295
Hazard class	-----	1.2F

### **FUZE**

MRV-U





## **122 mm “GRAD” ARTILLERY ROCKET**

The artillery rocket intended for fire support against fortified, light armored or non-armoured targets. It is designed to incapacitate enemy troops and to neutralize enemy command posts and communication centers.

### **TECHNICAL DATA**

Caliber	-----	122 mm
Length	-----	2875 mm
Total mass	-----	66 kg
Mass of warhead with fuze	-----	19,1 kg
Charge mass	-----	20,45 kg
Motor total impulse	-----	39700 Ns
Temperature range of use	-----	- 30 °C to + 50°C
Optimal angle of elevation	-----	48°
Range	-----	20.1 km
Fuze - upper impact mechanical with point detonating and delay action		MRV-U

### **PACKING**

1 rocket in a wooden case		
Case dimension	-----	2900 x 285 x 225 mm
Case gross weight	-----	98 kg
Case volume	-----	0.21 m <sup>3</sup>
UN no.	-----	0295
Hazard class	-----	1.2F

### **FUZE**

MRV-U





## **107mm M06**

# **ARTILLERY ROCKET**

The unguided extended range artillery rocket 107 M06 is designed to incapacitate or destroy enemy troops, equipment, enemy forces at meeting places, enemy convoys, prevent assaults by parachute troops and invasions from the sea, neutralize enemy command posts and communication centers.

The rocket has HE warhead.



### **TECHNICAL DATA**

Caliber-----	107 mm
Rocket length with UTI M84 fuze-----	825 mm
Rocket mass-----	17,6 kg
Fuze mass-----	0,35 kg
Explosive mass-----	1,25 kg
Maximum range-----	11,5 km
Temperature range of use-----	- 30 to + 50°C
Fuze - impact, supequick, inertia type-----	UTI M84

### **PACKING**

2 rockets in a wooden case	
Case dimension-----	1081 x 370 x 215 mm
Case gross weight -----	51 kg
Case volume-----	0.08 m <sup>3</sup>
UN no.-----	0180
Hazard class-----	1.1F

### **FUZE** UTI, M84





## **107mm M15 ARTILLERY ROCKET**

The unguided artillery rocket 107mm M15 is designed to incapacitate or destroy enemy troops, equipment, enemy forces at meeting places, enemy convoys, prevent assaults by parachute troops and invasions from the sea, neutralize enemy command posts and communication centers.

The rocket has HE warhead.

### **TECHNICAL DATA**

Caliber-----	107 mm
Rocket length with UTI M84 fuze-----	827 mm
Rocket mass-----	18,6 kg
Fuze mass-----	0,35 kg
Explosive mass-----	1,25 kg
Maximum range-----	8,5 km
Temperature range of use-----	- 30°C to + 50°C
Fuze - impact, superquick, inertia action-----	UTI M84



### **PACKING**

2 rocket in a wooden case	
Case dimension-----	941 x 370 x 235 mm
Case gross weight -----	51 kg
Case volume-----	0.07m <sup>3</sup>
UN no.-----	0180
Hazard class-----	1.1F

### **FUZE**

UTI, M84





## **128 mm “OGANJ - M18”** **ARTILLERY ROCKET**

The unguided rocket cal.128mm, 'OGANJ', M18 is artillery rocket for fire support against fortified and non-fortified points, light armored and non-armoured targets and enemy manpower, as much as destruction of command posts and communication centers.



### **TECHNICAL DATA**

Rocket caliber-----	128 mm
Warhead caliber-----	128 mm
Rocket length-----	2785 mm
Rocket mass-----	64 kg
Warhead mass-----	19,5 kg
Warhead effective action radius -----	40 m
Maximum range-----	22 km
Temperature range of use-----	- 30°C to +50°C
Fuze - point detonating, delay action-----	UTU M12

### **PACKING**

1 rocket in a wooden case	
Case dimension-----	2900 x 285 x 225 mm
Case gross weight -----	90 kg
Case volume-----	0.21 m <sup>3</sup>
UN no.-----	1.2F
Hazard class-----	0295



## **128 mm “OGANJ - M19”** **ARTILLERY ROCKET**

Unguided rocket 128mm, 'OGANJ', M19 is intended for neutralization of area targets, enemy manpower, fortified and non-fortified points as much as light armoured and non-armoured vehicles.

### **TECHNICAL DATA**

Caliber-----	128 mm
Length-----	2800 mm
Mass-----	68 kg
Warhead mass-----	20 kg
Temperature range-----	-30°C to +50°C
Rocket range-----	40km

It is completed with two fuze types:

- UTU, M12 superquick fuze with delay action and UB, M18 proximity fuze

### **PACKING**

1 rocket in a wooden case	
Case dimension-----	2900 x 285 x 225 mm
Case gross weight -----	90 kg
Case volume-----	0.21 m <sup>3</sup>
UN no.-----	1.2F
Hazard class-----	0295





## **128 mm “OGANJ - M20” ARTILLERY ROCKET**

Unguided rocket cal.128mm, 'OGANJ', M20 is intended for neutralization of area targets, enemy manpower, as much as destruction of command posts and communication centers.

### **TECHNICAL DATA**

Rocket range-----	15- 50 km
Precision at target (CEP)-----	< 0.5%
Caliber-----	128 mm
Length-----	3600 mm
Mass-----	82 kg
Warhead-----	XM12A3
Warhead mass-----	19 kg
Warhead type-----	HE with fragmentation
Type and mass of explosives-----	TNT+RDX 4,5 kg
Action radius-----	40 m
Fuze-----	proximity fuze with impact action
Propellant charge-----	Composite
Temperature range-----	-30°C to +50°C

### **PACKING**

1 rocket in a wooden case	
Case dimension-----	2900 x 285 x 225 mm
Case gross weight-----	90 kg
Case volume-----	0.21 m <sup>3</sup>
UN no.-----	1.2F
Hazard class-----	0295







## **MALYUTKA 9M14P1-2T ANTITANK MISSILE**

The wire guided antitank missile with semiautomatic guidance system (SACLOS) 9M14P1 (and improved 9M14PB1) is an effective antitank combat weapon with ranges up to 3000m, high hit probability.



### **TECHNICAL DATA**

Maximum firing distance	-----	3000 m
Minimum firing distance	-----	500 m
Penetration of warhead after ERA	-----	750 mm
Mean flight velocity	-----	120 m/s
Caliber	-----	125 mm
Length	-----	985 mm
Wing span	-----	393 mm
Transverse dimensions of missile with folded wings	-----	185 x 185 mm
Rocket mass	-----	12,6 kg
Temperature range	-----	- 30°C to + 50°C
Guiding system	-----	manually with POLK 9K11 (hit probability ≥ 60%) and semi-automatically with POL M83 (hit probability ≥ 80%)

### **PACKING**

1 set in a wooden case	
Case dimension	----- 1051 x 340 x 350 mm
Case gross weight	----- 30 kg
Case volume	----- 0.13m <sup>3</sup>
UN no.	----- 0287
Hazard class	----- 1.1D



## **MALYUTKA 9M14P1-2E ANTITANK MISSILE**

The wire guided antitank missile with semiautomatic guidance system (SACLOS) 9M14P1 (and improved 9M14PB1) is an effective antitank combat weapon with ranges up to 3000m, high hit probability.



### **TECHNICAL DATA**

Maximum firing distance	-----	3000 m
Minimum firing distance	-----	500 m
Overpressure of warhead at 7m open space	-----	≥0,3 bar
Mean flight velocity	-----	120 m/s
Caliber	-----	125 mm
Length	-----	866 mm
Wing span	-----	393 mm
Transverse dimensions of missile with folded wings	-----	185 x185 mm
Rocket mass	-----	12,6g
Temperature range	-----	-30°C to + 50°C
Guiding system	-----	manually with POLK 9K11(hit probability ≥ 60%) and semi-automatically with POL M83 (hit probability ≥ 80%)

### **PACKING**

1 set in a wooden case	
Case dimension	-----1051 x 340 x 350 mm
Case gross weight	-----30 kg
Case volume	-----0.13m <sup>3</sup>
UN no.	-----0287
Hazard class	-----1.1D

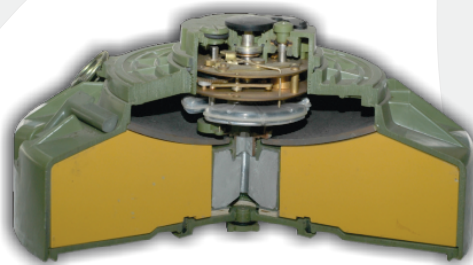




## **TMRP- 6**

### **ANTI-TANK DESTRUCTIVE PIERCING MINE**

The antitank destructive piercing mine- 6 is intended for incapacitating and demolition of enemy armored and other combat and transport vehicles. It has a destructive and penetrating effect.



- Dimensions----- Ø 290 x 132mm
- Mass ----- 7.2kg
- Explosive charge ----- Cast TNT
- Explosive charge mass ----- 5.1 kg
- Initiation-----Through the fuze
- Fuze arming time-----1 or 4 mins
- Fuze activation ----- - Through a lever
  - By stepping on a mine plate
- Activation force ----- - Through a lever 1.3 – 1.7daN
  - By stepping 150 -350daN
- Step-on area ----- 214 cm<sup>2</sup>
- Safe operational temperature range----- - 30° C to + 60°C
- Mine laying operation ----- - Manual
  - Minelayer PMR-3b
- Transport ----- any
- Stability on mine field ----- 6 months (the worst conditions)
- Piercing action ----- penetrates 40 mm steel plate from 800 mm

#### **PACKING**

4 complete mines per box

Dimensions-----330 x 650 x 330mm

Gross weight ----- 43 kg

Volume----- 0.07m<sup>3</sup>

UN number ----- 0137

Hazard class-----1.1D



## **TMA-4**

# **ANTIMAGNETIC ANTI-TANK MINE**

The antitank destructive piercing mine- 6 is intended for incapacitating and demolition of enemy armored and other combat and transport vehicles. It has a destructive and penetrating effect.



- Dimensions----- Ø 285 x 110 mm
- Mass ----- 6.3 kg
- Explosive charge ----- Cast TNT
- Explosive charge mass ----- 5.5 kg
- Initiation-----Through the fuze
- Activation force ----- 100 - 200 daN
- Step-on area -----Ø 200 mm (314 cm<sup>2</sup>)
- Safe operational temperature range----- - 30°C to + 60°C
- Mine laying operation----- - Manual  
- Minelayer
- Transport ----- any
- Stability on mine field ----- 6 months (the worst conditions)

### **PACKING**

4 pcs per packing set

The set is packed in a barrel.

Dimensions----- Ø 330 x 370 mm

Volume----- 0.032 m<sup>3</sup>

UN number ----- 0137

Hazard class-----1.1D



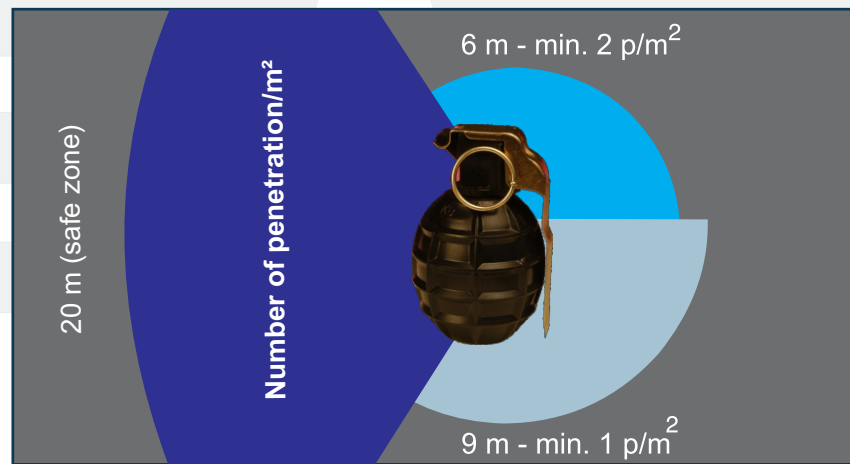
## M-75 HAND GRENADE

The hand grenade M-75 is intended for destruction of enemy troops located in different types of shelters and open areas.

### TECHNICAL DATA



Mass	-----	355 g
Dimensions	-----	Ø 57 x 89 mm
Explosive charge – plastic explosive	-----	36 g
Grenade body – plastic with steel balls	-----	Ø 2 – 2,9 mm
Safety element pulling force	-----	68 – 177 N
Lever deflection safety angle	-----	min 35°
Delay time	-----	3-4,4 s
Proper function within temperature range	-----	-30° to + 60°C
Convenient for any kind of transportation		



### PACKING

- 1 complete grenade per plastic box
- 36 pcs. per wooden case
- Wooden case dimensions----- 607 x 480 x 174mm
- Case gross weight-----23kg
- Case volume-----0.038m<sup>3</sup>
- UN No.-----0293
- Hazard class-----1.2F



## **M-84**

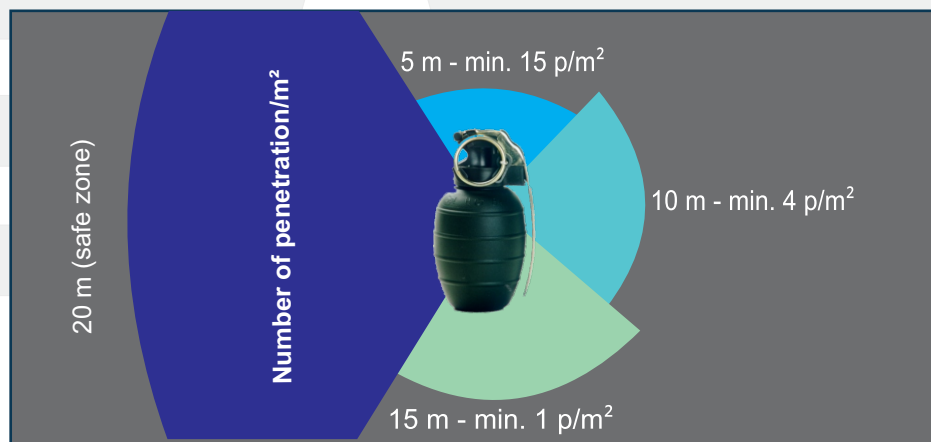
# **HAND GRENADE**

The hand grenade M-84 is intended for destruction of enemy troops located in different types of shelters and open areas.

### **TECHNICAL DATA**



Mass	480 ± 20 g
Dimensions	Ø 60 x 115 mm
Explosive charge – plastic explosive	95 ± 5 g
Grenade body – plastic with steel balls	Ø 2 – 2,3 mm
Safety element pulling force	70 do 150 N
Lever deflection safety angle	min 50°
Delay time	4 s
Proper function within temperature range	-30°C to + 60°C



### **PACKING**

- 1 complete grenade per plastic box
- 24 psc per wooden case
- Wooden case dimensions ----- 553 x 429 x 223 mm
- Case gross weight ----- 23.5 kg
- Case volume ----- 0.040 m<sup>3</sup>
- UN No.-----0293
- Hazard class-----1.2F



**40mm**

## **BULLET WITH BLASTING PROJECTILE**

It is designed to be used against live force in open or sheltered space. The bullet is fired from under-barrel grenade launcher GP-25, directly (holding firing device on a shoulder) in the range of 50 to 400m, or indirectly by curved trajectory in the range of 200 to 350m.



### **TECHNICAL DATA**

- Caliber ----- 40 mm
- Round mass----- 260 g
- Round length -----105 mm
- Explosive charge FH-5----- 49 g
- Muzzle velocity-----76,5 m/s
- Powder charge mass----- 0,6 g
- Max. pressure of powder gases-----900 bars
  
- Vertical target accuracy at 150 m
  - per height  $V_v < 0,5$  m
  - per direction  $V_p < 0,5$  m
  
- Max. range-----400 m
- Accuracy at max range
  - per distance  $V_{dt} < 14$ m
  - per direction  $V_{pt} < 7$ m
  
- Casualty radius----- min. 9 m
- Fuze-----UT, M02 SP
- Muzzle safety-----min. 15 m
- Burning time of self-destruction device-----15 s
  
- The fuze has interrupted initiating train.
- Bullet and fuze----- waterproof
- Temperature range of use ----- - 53° C to +71° C
- Suitable for all kinds of transportation.



### **PACKING**

- Box dimensions----- 596 x 366 x 196 mm
- Total mass ----- 23,5 kg
- Total volume ----- 0,043 m<sup>3</sup>
- UN no.----- 0007
- Hazard class-----1.4F
- The bullet is packed in hermetically sealed plastic container.
- 40 containers are packed in wooden boxes.



## **40mm**

# **BULLET WITH BLASTING BOUNDING PROJECTILE**

It is designed to be used against live force in open or sheltered space. The bullet is fired from under-barrel grenade launcher GP-25, directly (holding firing device on a shoulder) in the range of 50 to 400m, or indirectly by curved trajectory in the range of 200 to 350m.

### **TECHNICAL DATA**

- Caliber ----- 40 mm
- Round mass ----- 300 g
- Round length-----125 mm
- Explosive charge FH-5----- 40 g
- Muzzle velocity -----75 m/s
- Powder charge mass----- 0,6 g
  
- Vertical target accuracy at 150 m
  - per height  $V_v < 0,5$  m
  - per direction  $V_p < 0,5$  m
  
- Max. range----- 400 m
- Accuracy at max range
  - per distance  $V_{dt} < 14$ m
  - per direction  $V_{pt} < 7$ m
  
- Casualty radius ----- min. 6 m
- Fuze ----- UT, M07
- Muzzle safety ----- min. 15 m
- Burning time of self-destruction device-----15 s
  
- The fuze has interrupted initiating train.
- Bullet and fuze----- waterproof
- Temperature range of use ----- 53° C to +71° C
- Suitable for all kinds of transportation.



### **PACKING**

- Box dimensions----- 596 x 366 x 196 mm
- Total mass ----- 23,5 kg
- Total volume ----- 0,043 m<sup>3</sup>
- UN no.----- 0007
- Hazard class-----1.4F
- The bullet is packed in hermetically sealed plastic container
- 40 containers are packed in wooden boxes



## 40mm **BULLET WITH CUMULATIVE PROJECTILE**

It is intended for use against light armored combat and non-combat vehicles at distances up to 150m. Beside the primary cumulative effect, there is also the secondary fragmentation effect on enemy live force. The bullet is fired from under-barrel grenade launcher GP-25.

### TECHNICAL DATA



- Caliber-----40 mm
- Round mass-----260 g
- Round length-----108 mm
- Explosive charge-----32 g
- Muzzle velocity-----76,5 m/s
- Powder charge mass-----0,6 g
- Max. pressure of powder gases-----900 bars

- Penetration through steel plate under the angle of 90°-----min.50 mm

- Vertical target accuracy at 150 m
  - per height  $V_{vt} < 0,5$  m
  - per direction  $V_{pt} < 0,5$  m

- Max. range-----400 m
- Accuracy at max. range
  - per distance  $V_{dt} < 14$ m
  - per direction  $V_{pt} < 7$ m



- Fuze-----UT,M02 SP
- Casualty radius-----min. 3 m
- Muzzle safety-----min. 15 m
- Safe activation distance-----50 m
- Burning time of self-destructing device-----15 s
- The fuze has interrupted initiating train.
- Bullet and fuze-----waterproof
- Temperature range of use ----- $-53^{\circ}$  C to  $+71^{\circ}$  C

### PACKING

- Box dimensions-----596 x 366 x 196 mm
- Total mass -----23,5 kg
- Total volume -----0,043 m<sup>3</sup>
- UN no.-----0007
- Hazard class-----1.4F
- The bullet is packed in hermetically sealed plastic container
- 40 containers are packed in wooden boxes



**40mm**

## **BULLET WITH INCENDIARY PROJECTILE**

Intended for incending easily inflammable materials as well as wounding enemy live force. The fragments of incendiary mixture can wound or inflame materials at distance up to 5m. The bullet is fired from under-barrel grenade launcher GP-25.



### **TECHNICAL DATA**

- Caliber----- 40 mm
- Round mass----- 260 g
- Round length-----105 mm
- Smoke mixture mass----- 80 g
- Muzzle velocity-----76,5 m/s
- Powder charge mass----- 0,6 g
- Max. pressure of powder gases----- 900 bars

- Vertical target accuracy at 150 m
  - per height  $V_{vt} < 0,5$  m
  - per direction  $V_{pt} < 0,5$  m
- Max. range----- 400 m

- Accuracy at max range
  - per distance  $V_{dt} < 14$ m
  - per direction  $V_{pt} < 7$ m



- Fuze----- UT, M02 SP
- Muzzle safety----- min. 15 m
- Safe activation distance----- 50 m
- Burning time of self-destructing device-----15 s
- The fuze has interrupted initiating train.
- Bullet and fuze ----- waterproof
- Temperature range of use ----- -53°C to +71°C

### **PACKING**

- Box dimensions-----596 x 366 x 196 mm
- Total mass ----- 23,5 kg
- Total volume -----0,043 m<sup>3</sup>
- UN no.----- 0007
- Hazard class-----1.4F
- The bullet is packed in hermetically sealed plastic container
- 40 containers are packed in wooden boxes



**40mm**

## **BULLET WITH SMOKE PROJECTILE**

Intended for marking ground targets as well as blinding live force. The cloud made by inflamed smoke mixture is compact with diameter of min. 3m. The cloud can last from 15 to 30s. In normal weather conditions, it is visible at distance of 2-3km.

The bullet is fired from under-barrel grenade launcher GP-25.



### **TECHNICAL DATA**

- Caliber----- 40 mm
- Round mass----- 260 g
- Round length-----108 mm
- Smoke mixture mass-----100 g
- Muzzle velocity-----76,5 m/s
- Powder charge mass-----0,6 g
- Max. pressure of powder gases----- 900 bars

- Vertical target accuracy at 150 m
  - per height  $V_{vt} < 0,5$  m
  - per direction  $V_{pt} < 0,5$  m
- Max. range----- 400 m
- Accuracy at max range
  - per distance  $V_{dt} < 14$  m
  - per direction  $V_{pt} < 7$  m



- Fuze----- UT, M02 SP
- Muzzle safety-----min. 15 m
- Safe activation distance-----50 m
- Burning time of self-destructing device-----15 s
- The fuze has interrupted initiating train.
- Bullet and fuze----- waterproof
- Temperature range of use ----- -53°C to +71°C

### **PACKING**

- Box dimensions-----596 x 366 x 196 mm
- Total mass ----- 23,5 kg
- Total volume ----- 0,043 m<sup>3</sup>
- UN no.----- 0016
- Hazard class----- 1.3G
- The bullet is packed in hermetically sealed plastic container
- 40 containers are packed in wooden boxes



**40mm**

## **BULLET WITH PRACTICE PROJECTILE**

Intended for training soldiers for all tactical actions with live projectile. The smoke mixture marks the place of the fall, and releases gasses visible from distance of 500m. The bullet is fired from under-barrel grenade launcher GP-25.

### **TECHNICAL DATA**



- Caliber-----40 mm
- Round mass-----260 g
- Round length-----105 mm
- Incendiary mixture mass-----10 g
- Muzzle velocity-----76,5 m/s
- Powder charge mass-----0,6 g
- Max. pressure of powder gases-----900 bars
  
- Vertical target accuracy at 150 m
  - per height  $V_{vt} < 0,5$  m
  - per direction  $V_{pt} < 0,5$  m
- Max. range-----400 m
  
- Accuracy at max range
  - per distance  $V_{dt} < 14$  m
  - per direction  $V_{pt} < 7$  m



- Fuze-----UT,M02 SP
- Muzzle safety-----min. 15 m
- Safe activation distance-----50 m
- Burning time of self-destructing device-----15 s
- The fuze has interrupted initial train.
- Bullet and fuze ----- waterproof
- Temperature range of use ----- -53°C to + 71°C

### **PACKING**

- Box dimensions-----596 x 366 x 196 mm
- Total mass -----23,5 kg
- Total volume -----0,043 m<sup>3</sup>
- UN no.-----0016
- Hazard class-----1.4S
- The bullet is packed in hermetically sealed plastic container.
- 40 containers are packed in wooden boxes.



## **FAB-100 M80**

### **HE FREE - FALL BOMB**

FAB - 100 M80 HE Bomb is intended for attack against targets of medium fortification level, such as industrial facilities, railroad junctions, roads, command posts, bridges or personnel.

The bomb may be released safe or armed at speed up to 1000 km/h.



#### **TECHNICAL DATA**

Bomb type-----FAB-100 M80  
Diameter----- 230 mm  
Length-----1490 mm  
Hook spacing (adaptable to A/C bomb rack)---- 250 and 355.6 mm

#### **Weights**

-Without fuzes----- 117 kg  
-Main explosive charge (TNT)----- 39 kg

#### **Fuzes**

-Type AVU-ET-----1 or 2  
-Type AUFK-----1 or 2

#### **PACKING**

12 bodies (4 x 3)----- one crate  
Case dimension -----1020 x 800 x 1600 mm  
Case gross weight-----1450 kg  
Case volume -----1.3 m<sup>3</sup>

12 Fins (24 hooks)----- one crate  
Case dimension-----1160 x 900 x 760 mm  
Case gross weight ----- 170 kg  
Case volume----- 0.8 m<sup>3</sup>  
UN no.-----0034  
Hazard class-----1.1D



## **FAB-250 M79**

### **HE FREE - FALL BOMB**

FAB - 250 M79 HE Bomb is intended for attack against targets of medium fortification level, such as industrial facilities, railroad junctions, roads, command posts, bridges or personnel. The bomb may be released safe or armed at speed up to 1000 km/h.



#### **TECHNICAL DATA**

Bomb type-----FAB-250 M79  
Diameter----- 325 mm  
Length----- 2015 mm  
Hook spacing (adaptable to A/C bomb rack)-----250 and 355.6 mm

#### **Weights**

-Without fuzes----- 240 kg  
-Main explosive charge (TNT)----- 105 kg

#### **Fuzes**

-Type AVU-ET-----1 or 2  
-Type AUFK-----1 or 2

#### **PACKING**

3 bodies----- one crate  
Case dimension ----- 1100 x 1300 x 500 mm  
Case gross weight----- 715 kg  
Case volume-----0.72 m<sup>3</sup>

9 Fins ----- one crate  
Case dimension-----1200 x 1200 x 1100 mm  
Case gross weight -----180 kg  
Case volume-----1.6 m<sup>3</sup>  
UN no.----- 0034  
Hazard class-----1.1D