

7.62x39mm  
Rifle Cartridges  
Type **56**



**7.62x39mm  
Rifle Cartridges  
Type 56**



► **Principal Data**

TYPE	STRUCTURE			
	Bullet	Case	Primer	Propellant Powder
General	Steel core, steel jacket and gilding metal envelope	Gilding metal and lacquered steel	Berdan primer	Camphor single base
Lead Core	Lead core, steel or brass jacket and gilding metal envelope	Brass or gilding metal or lacquered steel	Berdan primer	Camphor single base
API	Steel core, steel jacket and gilding metal envelope	Brass or gilding metal or lacquered steel	Berdan primer	Camphor single base
Tracer	Lead core tracer bullet, steel jacket and gilding metal envelope	Gilding metal or lacquered steel	Berdan primer	Camphor single base
Blank		Gilding metal	Berdan primer	Camphor single base

TYPE	TECHNICAL SPECIFICATIONS						
	Round Length	Round Weight	Case Length	Bullet Weight	Muzzle Velocity	Max. Chamber Pressure	Remarks
General	56mm	15.90-16.90g	39mm	7.75-8.05g	720±10m/s	≤275Mpa	
Lead Core	56.25mm	16.90-17.75g	39mm	8.3g	738±10m/s	≤275Mpa	
API	56mm	15.6-16.7g	39mm	7.5-7.93g	730±10m/s	≤280Mpa	Penetration Rate ≥80% (Penetrate 7mm steel plate of the gasoline tank and ignite the fuel at 200m)
Tracer	55-56mm	15.26-16.05g	39mm	7.45-7.67g	720±10m/s	≤275Mpa	Tracer Rate ≥85% (800m)
Blank	48.2mm	8.6g					Safety Range ≤7m

TYPE	ARMAMENT	PACKAGE	GROSS WEIGHT	VOLUME OF PACKAGE
General	7.62mm semi-automatic rifle type 56 7.62mm sub-machine gun type 56 7.62mm light machine gun type 56 7.62mm automatic rifle type 81	25rds/Paper parcel 750rds/Galvanized iron box 1,500rds/Wooden case	30 kg/Wooden case	470×340×150mm
Lead Core			31 kg/Wooden case	
API			30 kg/Wooden case	
Tracer			28 kg/Wooden case	
Blank			17 kg/Wooden case	

7.62x54mm  
Rifle Cartridges  
Type **53**



**7.62x54mm  
Rifle Cartridges  
Type 53**



Rifle Cartridges



Blank Cartridges

► **Principal Data**

TYPE	STRUCTURE			
	Bullet	Case	Primer	Propellant Powder
General	Steel core, steel jacket and gilding metal envelope	Gilding metal	Berdan primer	Camphor single base
API	Steel core, steel jacket and gilding metal envelope	Gilding metal	Berdan primer	Camphor single base
Tracer	Steel core, steel jacket and gilding metal envelope	Gilding metal	Berdan primer	Camphor single base
Blank		Gilding metal	Berdan primer	Porous single base

TYPE	TECHNICAL SPECIFICATIONS						
	Length	Weight	Case Length	Bullet Weight	Muzzle Velocity	Max. Chamber Pressure	Remarks
General	77mm	21.70-23.20g	54mm	9.4-9.75g	830±10m/s	≤300Mpa	
API	77.16mm	22.40-24.20g	54mm	10.18-10.72g	810±10m/s	≤300Mpa	Penetration Rate ≥80% (Penetrate 7mm steel plate of the gasoline tank and ignite the fuel at 200m)
Tracer	77.16mm	21.60-23.40g	54mm	9.4-9.9g	810±10m/s	≤300Mpa	Tracer Rate ≥85% (1,000m)
Blank	53.72mm	11.55g					Safety Range ≤7m

TYPE	ARMAMENT	PACKAGE	GROSS WEIGHT	VOLUME OF PACKAGE
General	7.62mm tank MG type 55/59	125 rds/Paper parcel 500rds/Galvanized iron box 1000rds/Wooden case	28kg/Wooden case	470×340×150mm
API	7.62mm light MG type 53		28kg/Wooden case	
	7.62mm heavy MG type 53/57		28kg/Wooden case	
Tracer	7.62mm universal MG type 67 7.62mm general MG type 80		28kg/Wooden case	
Blank	7.62mm sniper rifle type 79	28kg/Wooden case		

# 7.62×51mm

Rifle Cartridges



# 7.62×51mm Rifle Cartridges



7.62×51mm Blank Cartridge



7.62×51mm Tracer Cartridge



7.62×51mm Ball Cartridge  
(gilding metal clad steel case)



7.62×51mm Ball Cartridge  
(brass case)

## ► Principal Data

TYPE	STRUCTURE			
	Bullet	Case	Primer	Propellant Powder
Brass Case	Lead core and brass jacket	Brass	Berdan or boxer primer	Camphor single base
General	Lead core, steel jacket and gilding metal envelope	Gilding metal	Berdan primer	Camphor single base
Tracer	Lead core, steel jacket and gilding metal envelope	Gilding metal	Berdan primer	Camphor single base
Blank		Brass	Berdan primer	Porous single base

TYPE	TECHNICAL SPECIFICATIONS						
	Length	Weight	Case Length	Bullet Weight	Muzzle Velocity	Max. Chamber Pressure	Remarks
Brass Case	71.12mm	23.90g	51mm	9.30g	837±15m/s	≤325Mpa	
General	71.12mm	23.10g	51mm	9.30g	837±15m/s	≤325Mpa	
Tracer	71.12mm	22.09-23.38g	51mm	9g	837±15m/s	≤344Mpa	Tracer Rate ≥85% (800m)
Blank	69.2mm	13g	68.7mm				Safety Range ≤5m

TYPE	ARMAMENT	PACKAGE	GROSS WEIGHT	VOLUME OF PACKAGE
Brass Case	M14 automatic rifle M60 general purpose MG	125rds/Paper parcel 500rds/Galvanized iron box 1000rds/Wooden case	29kg/Wooden case	470×340×150mm
General			29kg/Wooden case	
Tracer			29kg/Wooden case	
Blank			19kg/Wooden case	

# 5.56×45mm

Rifle Cartridges



# 5.56×45mm Rifle Cartridges



5.56×45mm Ball Cartridge



5.56×45mm Blank Cartridge

## ► Principal Data

TYPE	STRUCTURE			
	Bullet	Case	Primer	Propellant Powder
Lead Core (M193)	Lead core and brass jacket	Brass	Boxer primer	Spheroid double base
Steel Core (SS109)	Lead core and brass jacket	Brass	Boxer primer	Spheroid double base
Blank		Brass	Boxer primer	Double or single base

TYPE	TECHNICAL SPECIFICATIONS						
	Length	Weight	Case Length	Bullet Weight	Muzzle Velocity	Max. Chamber Pressure	Remarks
Lead Core (M193)	57.4mm	11.6g	45mm	3.56g	965±12m/s	≤358Mpa	
Steel Core (SS109)	57.4mm	12g	45mm	4g	915±15m/s	≤358Mpa	
Blank	57.4mm	6.5g	56.9mm				Safety Range ≤4.57m

TYPE	ARMAMENT	PACKAGE	GROSS WEIGHT	VOLUME OF PACKAGE
Lead Core (M193)	CQ 5.56mm automatic rifle M16/M16A1 automatic rifle Minimi 5.56mm light MG (Twist pitch of rifling: 12 inches)	40rds/Paper parcel 800rds/Galvanized iron box 1600rds/Wooden case	24kg/Wooden case	470×340×150mm
Steel Core (SS109)	M16A2 automatic rifle Minimi 5.56mm light MG (Twist pitch of rifling: 7 inches)		24kg/Wooden case	
Blank	CQ 5.56mm automatic rifle M16/M16A1/M16A2, FNC automatic rifle Minimi 5.56mm light MG		16kg/Wooden case	



# 12.7×108mm

Cartridges



# 12.7×108mm Cartridges



## ► Principal Data

TYPE	STRUCTURE			
	Bullet	Case	Primer	Propellant Powder
API Type54	Steel core, steel jacket and gilding metal envelope	Steel	Berdan primer	Graphite single base
API-T Type54	Steel core, steel jacket and gilding metal envelope	Steel	Berdan primer	Graphite single base
APDS Type54	Tungsten core and plastic sabot	Steel	Berdan primer	Spheroid double base
API-T Type89	Steel core, steel jacket and gilding metal envelope	Steel	Berdan primer	Double base
AP-HEI	Steel core, steel jacket and gilding metal envelope and APHEI bullet	Steel	Berdan primer	Graphite single base
APDS-HEI	Steel core, steel jacket and gilding metal envelope and APHEI bullet	Steel	Berdan primer	Graphite single base

TYPE	TECHNICAL SPECIFICATIONS						
	Length	Weight	Case Length	Bullet Weight	Muzzle Velocity	Max. Chamber Pressure	Remarks
API Type54	145.5-147mm	110-126g	107.4-108mm	47.4-49.0g	820 ±10m/s	≤294.12 MPa	Armor-piercing Rate ≥90% (Pierce 20mm steel plate at 100m in 20° AOI) Incendiary Rate ≥80% (Pierce 15mm steel tank and ignite the fuel at 70m)
API-T Type54	145.5-147mm	112-123g	107.4-108mm	43.2-44.8g	820 ±10m/s	≤294.12 MPa	Armor-piercing Rate ≥90% (Pierce 15mm steel plate at 100m) Incendiary Rate ≥80% (Pierce 15mm steel tank and ignite the fuel at 70m) Tracer Rate ≥80% (1,500m)
APDS Type54	145.5-147mm	98.7-108.7g	107.4-108mm	27.2-28.7g	≥1150m/s	≤326.3 MPa	Armor-piercing Rate ≥60% (Pierce 15mm steel plate at 1,000m in 45° AOI)
API-T Type89	145.5-147mm	130-138g	107.4-108mm	59-60.5g	817.5 ±7.5m/s	≤294 MPa	Armor-piercing Rate ≥70% (Pierce 15mm steel plate at 1,000m in 45° AOI) Incendiary Rate ≥70% (Pierce 15mm steel tank and ignite the fuel at 100m in 45° AOI) Tracer Rate ≥80% (1,500m)
AP-HEI	145.5-147mm	≤126g	107.4-108mm	47.4-49g	817.5 ±7.5m/s	≤294.12 MPa	Armor-piercing Rate ≥90% (Pierce 20mm steel plate at 100m) Incendiary Rate ≥75% (Pierce 15mm steel tank and ignite the fuel at 70m) Explosive Rate ≥90% (Pierce 1.8mm steel plate and penetrate 1mm steel plate at 300m)
APDS-HEI	145.5-147mm	≤126g	107.4-108mm	47.4-49g	817.5 ±7.5m/s	≤294.12 MPa	Armor-piercing Rate ≥90% (Pierce 10mm steel plate at 800m in 30° AOI) Incendiary Rate ≥75% (Pierce 10mm steel tank and ignite the fuel at 100m in 30° AOI) Explosive Rate ≥90% (Pierce 1.8mm steel plate and penetrate 1mm steel plate at 300m)

TYPE	ARMAMENT	PACKAGE	GROSS WEIGHT	VOLUME OF PACKAGE
API Type54	12.7mm tank AAMG type59 12.7mm heavy MG type QJZ89 12.7mm AAMG Type54/54-1 I77/85/W85	85rds/Galvanized iron box 170rds/Wooden case	26kg/Wooden case	465×338×147mm
API-T Type54			26kg/Wooden case	
APDS Type54			24kg/Wooden case	
API-T Type89			26kg/Wooden case	
AP-HEI			26kg/Wooden case	
APDS-HEI			26kg/Wooden case	

# 12.7×99mm

Rifle Cartridges



# 12.7×99mm Rifle Cartridges



## ► Principal Data

TYPE	STRUCTURE			
	Bullet	Case	Primer	Propellant Powder
General	Steel core and brass jacket	Brass	Boxer primer	DBP single base
AP	Steel core and brass jacket	Brass	Boxer primer	DBP single base
Tracer	Steel core and brass jacket	Brass	Boxer primer	DBP single base
API	Steel core and brass jacket	Brass	Boxer primer	DBP single base

TYPE	TECHNICAL SPECIFICATIONS						
	Length	Weight	Case Length	Bullet Weight	Muzzle Velocity	Max. Chamber Pressure	Remarks
General	138.5mm	116g	99mm	43.35-45.65g	855±10m/s	≤350MPa	
AP	138.5mm	116g	99mm	43.35-45.65g	855±10m/s	≤350MPa	Armor-piercing Rate ≥80% (Pierce 15mm steel plate at 160m)
Tracer	138.5mm	116g	99mm	43.35-45.65g	837±10m/s	≤350MPa	Tracer Rate ≥80% (1200m)
API	138.5mm	116g	99mm	42.1g	837±10m/s	≤350MPa	Armor-piercing Rate ≥80% (Pierce 15mm steel plate at 160m) Incendiary Rate ≥80% (Pierce 15mm steel tank and ignite the fuel at 100m)

TYPE	ARMAMENT	PACKAGE	GROSS WEIGHT	VOLUME OF PACKAGE
General	.50 M2 machine gun	100rds/Galvanized iron box 200rds/Wooden case	35kg/Wooden case	369×300×272mm
AP			33kg/Wooden case	
Tracer			33kg/Wooden case	
API			33kg/Wooden case	

# 14.5mm

Series Cartridges



# 14.5mm Series Cartridges



14.5mm API Cartridge Type 56



14.5mm API-T Cartridge Type 56



14.5mm APDS Cartridge Type 91

## Principal Data

TYPE	STRUCTURE			
	Bullet	Case	Primer	Propellant Powder
API	Steel core, steel jacket and gilding metal envelope	Steel	Berdan primer	Graphite single base
API-T	Steel core, steel jacket and gilding metal envelope	Steel	Berdan primer	Graphite single base
APDS	Tungsten core and plastic sabot	Steel	Berdan primer	Double base
APDS-HEI	Tungsten core, steel jacket and gilding metal envelope and APHEI bullet	Steel	Berdan primer	Camphor single base

TYPE	TECHNICAL SPECIFICATIONS						
	Length	Weight	Case Length	Bullet Weight	Muzzle Velocity	Max. Chamber Pressure	Remarks
API	154.5-156mm	175-188g	113.6-114mm	58.2-61g	987.5±7.5m/s	≤319MPa	Armor-piercing Rate ≥80% (Pierce 20mm steel plate at 200m in 20° AOI) Incendiary Rate ≥80% (Pierce 20mm steel tank and ignite the fuel at 100m in 20° AOI)
API-T	154.5-156mm	170-183g	113.6-114mm	63-64.8g	1,005±10m/s		Armor-piercing Rate ≥80% (Pierce 20mm thick steel plate at 200m in 20°) Incendiary Rate ≥80% (Pierce 20mm steel tank and ignite the fuel at 100m in 20° AOI) Tracer Rate ≥80% (2,000m)
APDS	173mm	98.7-108.7g	113.6-114mm	45g	≥1,250m/s	≤355.7MPa	Armor-piercing Rate ≥80% (Pierce 20mm steel plate at 1000m in 50° AOI)
APDS-HEI	154.5-156mm	175-181g	113.6-114mm	58.3-65.3g	987.5±7.5m/s	≤338MPa	Armor-piercing Rate ≥80% (Pierce 20mm steel plate at 200m in 20° AOI) Incendiary Rate ≥80% (Pierce 20mm steel tank and ignite the fuel at 100m in 20° AOI) Explosive Rate ≥90% (Pierce 1.8mm steel plate and penetrate 1mm steel plate at 300m)

TYPE	ARMAMENT	PACKAGE	GROSS WEIGHT	VOLUME OF PACKAGE
API	14.5mm quadruple AAMG type 56 14.5mm twin-barreled AAMG type 58	47rds/Galvanized iron box 94 rds/Wooden case	23kg/Wooden case	465×338×147mm
API-T	14.5mm AAMG type 75/75-1/80		23kg/Wooden case	
APDS	14.5mm AAMG type QJZ91		26kg/Wooden case	
APDS-HEI	14.5mm quadruple AAMG type 56 14.5mm twin-barreled AAMG type 58 14.5mm AAMG type 75/75-1/80		23kg/Wooden case	

# Pistol Cartridges



# Pistol Cartridges

## ► Principal Data

TYPE	STRUCTURE			
	Bullet	Case	Primer	Propellant Powder
7.62mm Pistol Cartridge Type 51	Lead core, steel or brass jacket and gilding metal envelope	Gilding metal	Berdan primer	Porous single base
7.62mm Pistol Cartridge Type DAP51B	Lead core, steel jacket and gilding metal envelope	Gilding metal	Berdan primer	Porous single base
7.62mm Pistol Blank Cartridge Type 51		Gilding metal	Berdan primer	Granular double base
7.62mm Pistol Cartridge Type 64	Lead core and brass jacket	Brass	Berdan primer	Granular double base
7.62mm Pistol Blank Cartridge Type 64		Brass	Berdan primer	Granular double base
7.62mm Silenced Pistol Cartridge Type 67	Lead core and brass jacket	Brass	Berdan primer	Spherical double base
9mm Pistol Cartridge Type 59	Lead core, steel jacket and gilding metal envelope	Gilding metal	Berdan primer	Porous single base
9×19mm Pistol Cartridge (Parabellum)	Lead core and brass jacket	Brass	Non-corrosive Boxer primer	Spherical double base
.380 Auto Pistol Cartridge	Lead core and brass jacket	Brass	Non-corrosive Boxer primer	Porous single base or double base
.380 Special +P Pistol Cartridge	Lead core and brass jacket	Brass	Non-corrosive Boxer primer	Porous single base or double base
.32 Revolver Pistol Cartridge	Lead core and brass jacket	Brass	Berdan primer	Granular double base
0.45 Auto Pistol Cartridge	Lead core and brass jacket	Brass	Non-corrosive Boxer primer	Granular double base





## ► Principal Data

TYPE	TECHNICAL SPECIFICATIONS						
	Length	Case Length	Weight	Bullet Weight	Muzzle Velocity	Max. Chamber Pressure	Remarks
7.62mm Pistol Cartridge Type51	34.45-34.85mm	25mm	9.94-10.72g	5.45-5.6g	435±15m/s	≤214.3MPa	
7.62mm Pistol Cartridge Type DAP51B	34.75mm	24.7mm	10-11.2g	5.62g	420±10m/s	≤220.6MPa	
7.62mm Pistol Blank Cartridge Type 51	30.9mm		4.8g	4.4g (case)			Safe Range ≤7m
7.62mm Pistol Cartridge Type 64	24.38-24.9mm	16.75-17mm	7.25-7.65g	4.72-4.87g	315m/s	≤122.6MPa	
7.62mm Pistol Blank Cartridge Type 64	20.6mm		3.1g	2.7g (case)			Safe Range ≤7m
7.62mm Silenced Pistol Cartridge Type 67	24.38-24.9mm	16.75-17mm	7.25-7.65g	4.72-4.87g	240±10m/s	≤215.69MPa	
9mm Pistol Cartridge Type 59	24.48-25mm	17.76-18.10mm	9.58-10.13g	6.0-6.2g	300±15m/s	≤118.6MPa	
9×19mm Pistol Cartridge (Parabellum)	29.69mm	19.15 mm	12.2-12.5g	8g	375±10m/s	≤215MPa	
.380 Auto Pistol Cartridge	24.95mm	17.25 mm	9.5-10g	6.15g	280±10m/s	≤118MPa	
.380 Special +P Pistol Cartridge	37mm	29.3mm	14.3g	10.24g	258m/s	≤150MPa	
.32 Revolver Pistol Cartridge	24.99mm	17.27 mm	7.4-7.6g	4.4-4.6g	290±15m/s	≤108-180MPa	
0.45 Auto Pistol Cartridge	32.3mm	22.81 mm	21.05g	14.75g	260±10m/s	≤132.39MPa	

# Pistol Cartridges



## ► Principal Data

TYPE	ARMAMENT	PACKAGE	GROSS WEIGHT	VOLUME OF PACKAGE
7.62mm Pistol Cartridge Type51	7.62mm pistol type 51/54 7.62mm automatic pistol type 80 7.62mm sub-MG type 50/54 7.62mm light sub-MG type 79/85 7.62mm silenced sub-MG type 64/85	70rds/Paper parcel 1,260rds/ Galvanized iron box	32kg/ Wooden case	470×342×130mm
7.62mm Pistol Cartridge Type DAP51B	7.62mm pistol type 54 7.62mm sub-MG type 54 7.62mm light sub-MG Type 79/85	2,520rds/Wooden case	32kg/ Wooden case	
7.62mm Pistol Blank Cartridge Type 51	7.62mm pistol type 51/54 7.62mm light sub-MG type 79/85	70 rds/Cardboard box 1260rds/Galvanized iron box 2520rds/Wooden case	20kg/ Wooden case	470×340×150mm
7.62mm Pistol Cartridge Type 64	7.62mm pistol type 64/77 7.62mm survival pistol type 77 7.62mm silenced pistol type 67	35rds/Cardboard box 1750rds/Galvanized iron box 3500rds/Wooden case	32kg/ Wooden case	470×340×160mm
7.62mm Pistol Blank Cartridge Type 64	7.62mm pistol type 64 7.62mm pistol type 77	35rds/Paper parcel 1750rds/Galvanized iron box 3500rds/Wooden case	17kg/ Wooden case	470×340×150mm
7.62mm Silenced Pistol Cartridge Type 67	7.62mm silenced pistol type 67	35 rds/Cardboard box 1750 rds/Galvanized iron box 3500 rds/Wooden case	32kg/ Wooden case	465×338×125mm
9mm Pistol Cartridge Type 59	9mm pistol type 59	16 rds/Cardboard box 1280 rds/Galvanized iron box 2560 rds/Wooden case	32kg/ Wooden case	470×340×150mm
9×19mm Pistol Cartridge (Parabellum)	9mm automatic pistolWalther M46/PP/PPK pistol (German)	50 rds/Cardboard box 2000 rds/Wooden case	28kg/ Wooden case	465×338×147mm
.380 Auto Pistol Cartridge	380 automatic pistolBeretta .380 pistol (Italy) Llama/Star .380 pistol (Spanish)	50 rds/Cardboard box 2000 rds/Wooden case	23kg/ Wooden case	370×231×135mm
.380 Special +P Pistol Cartridge	.38 revolver	50 rds/Cardboard box 1500 rds/Wooden case	32kg/ Wooden case	380×240×150mm
.32 Revolver Pistol Cartridge	.32 Colt automatic pistol .32 Colt PP pistol	35 rds/Cardboard box 3500 rds/Wooden case	32kg/ Wooden case	470×340×160mm
0.45 Auto Pistol Cartridge	.45 automatic pistolColt M1911 pistol	50 rds/Cardboard box 1000 rds/Wooden case	27kg/ Wooden case	506×350×100mm

# 40mm

Rifle Grenades



## 40mm Rifle Grenades



### ► General Description

The 40mm Rifle Grenades, issued to infantry squads, are used to destroy light armored targets within 120 m, to inflict live targets within 300 m or to lay a smokescreen or set on fire within 300 m. They include five types of rifle grenades: DQP1 HEAT, DQF1 smoke, DQR1 incendiary, DQS1 HE and DQD1 time-fuze HE. All types of rifle grenades can be launched from the 7.62 mm rifle Type 81.

### ► Principal Data

Type  
Diameter  
Length  
Weight  
Armor Penetration  
Max. Range

**DQP1 (HEAT)**  
40 mm  
360 mm  
360 g  
80 mm (at 45°)  
120 m

Type  
Diameter  
Length  
Weight  
Smoke Screen Size (H×L)  
Smoke-producing Time  
Max. Range

**DQF1 (Smoke)**  
40 mm  
265 mm  
360 g  
≥2.5 m×12 m  
55 s  
300 m

Type  
Diameter  
Length  
Weight  
Burning Time  
Max. Range

**DQR1 (Incendiary)**  
40 mm  
284 mm  
360 g  
180 s  
320 m

Type  
Diameter  
Length  
Weight  
Casualty Radius  
Max. Range

**DQS1 (HE)**  
40 mm  
340 mm  
360 g  
7 m  
300 m

Type  
Diameter  
Length  
Weight  
Casualty Radius  
Max. Range

**DQD1 (Time-fuze HE)**  
40 mm  
260 mm  
365 g  
9.4 m  
300 m

40mm HEAT Rocket Shell  
Type **69**



## 40mm HEAT Rocket Shell Type 69



### ► General Description

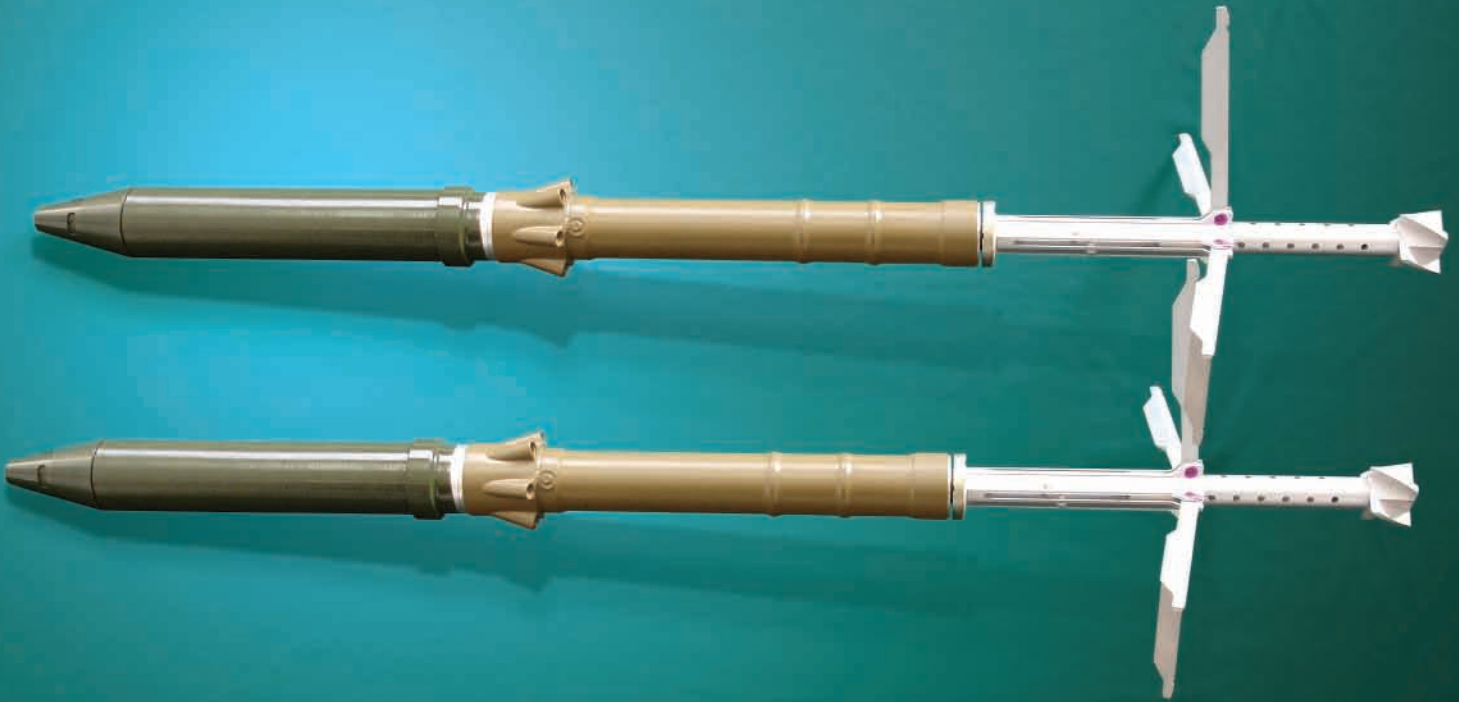
The 40mm HEAT Rocket Shell Type 69 is for 40mm Rocket Launcher Type 69 to destroy tanks and armored vehicles.

### ► Principal Data

Type of Fuze	Dian-2 (Piezo-electric)
Diameter	40 mm
Max. Velocity	295 m/s
Range	330 m
Penetration	120 mm/65°
Weight of Warhead	2.06 kg
Weight	2.21 kg
Length	925 mm
Package	
-Type	Wooden box
-Dimension	738×382×250 mm
-Quantity	6
-Gross weight	26 kg

# 40mm

Obstacle-breaching  
Rocket



## 40mm Obstacle-breaching Rocket



### ▶ General Description

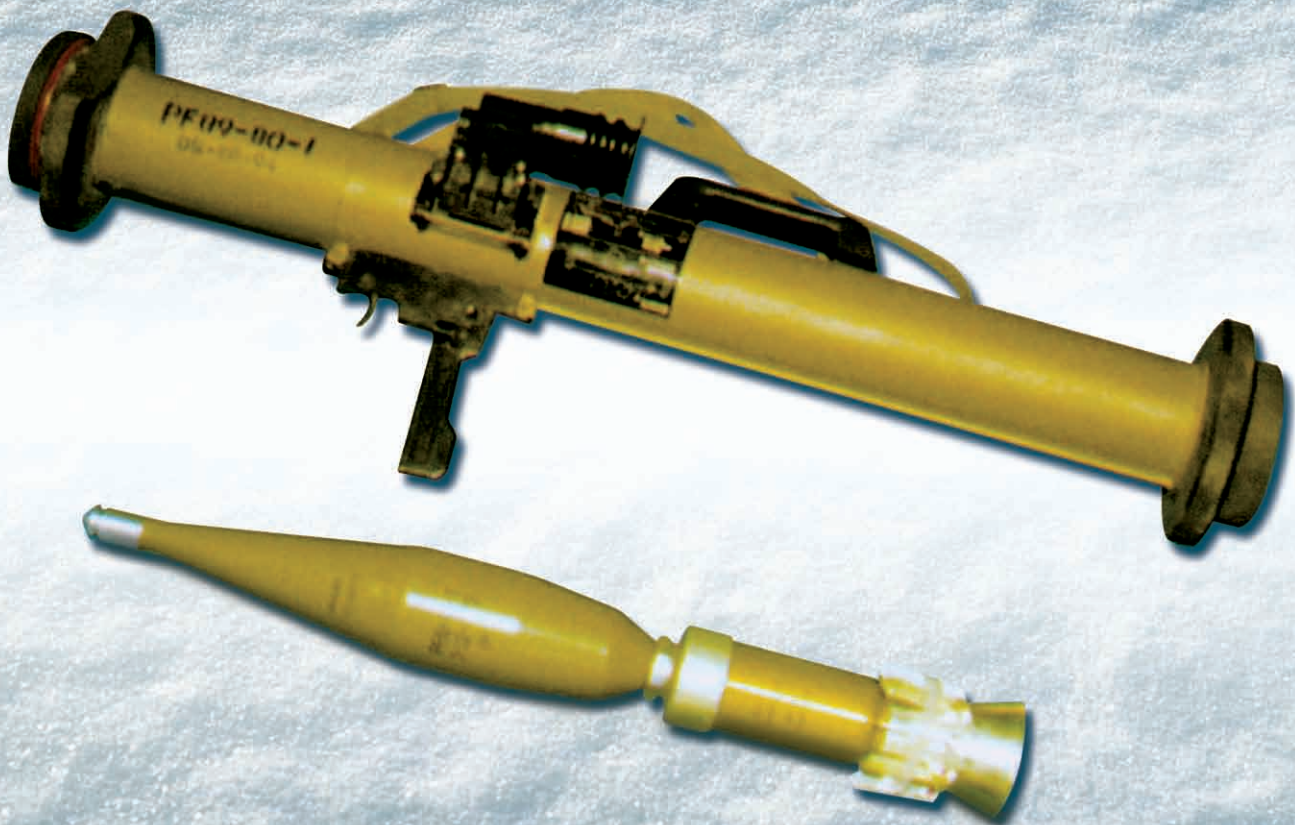
The 40mm Obstacle-breaching Rocket is a newly-developed RPG-7 ammunition with the ability to engage and defeat light armored vehicles, material targets and light structures.

### ▶ Main function

Warhead Diameter	51 mm
Round Length	900 mm
Round Weight	2.88 kg
Effective Range	300 m
Accuracy	≤ 0.45×0.45 m
Obstacle-breaching Ability (80~300 m)	12.5 mm RHA 250 mm reinforced concrete structure 500 mm brick wall 1.2 m shot bag
Fuze Type	Impact with short delay
Ambient Temperature	-40~+55
Shelf Life	10 years



80mm Individual  
Anti-tank HEAT Rocket  
Type **PF89**



80mm Individual  
Anti-tank HEAT Rocket  
Type **PF89**



► General Description

The 80mm Individual Anti-tank HEAT Rocket Type PF89 is a one-shot portable anti-tank weapon, and is used to destroy tanks, armored vehicles and defense facilities.

► Principal Data

Rocket Diameter	80 mm
Launcher Caliber	80.4 mm
Launcher Weight	3.6 kg
HEAT Rocket Weight	1.85 kg
Muzzle Velocity	174 m/s
Effective Range	
-Without sight	200 m
-With sight	400 m
Penetration	180 mm/65°
Vertical Target Dispersion at 200 m	0.35×0.35 m
Length (carrying state)	900 mm
Length (firing state)	860 mm
Package	
-6 rds/ Wooden box	
-Dimension	1,040×578×394 mm
-Gross weight	40 kg

# 80mm

Individual FAE Rocket



## 80mm Individual FAE Rocket



### ► General Description

The 80mm Individual FAE Rocket is mainly used to destroy hostile firing points, pillboxes and combat vehicles. This new type of Fuel Air Explosives (FAE) weapon can effectively neutralize the covert hostile forces through super high pressure and high temperature field. It is a one-shot compact system, featured with easy operation, reliability, easy maintenance and long shelf life.

### ► Principal Data

<u>Rocket Diameter</u>	80 mm
<u>Launcher Caliber</u>	80.4 mm
<u>Weight</u>	6.5 kg
<u>Muzzle Velocity</u>	124 m/s
<u>Max. Range</u>	850 m
<u>Vertical Target Dispersion at 200 m</u>	0.35×0.35 m
<u>Power</u>	
-Open Ground	
P(3 m)	≥ 0.28 Mpa
P(5 m)	≥ 0.04 Mpa
-Blindage	
P(90 m <sup>3</sup> )	≥ 0.4 Mpa
<u>Length (carrying state)</u>	900 mm

82 mm HEAT MK1 Shell  
for Recoilless Gun

Type **78**



82 mm HEAT MK1 Shell  
for Recoilless Gun  
Type 78



▶ General Description

This Shell is a finned rocket-assisted HEAT ammunition launched from the recoilless gun. It is mainly used to destroy armoured targets and reinforced concrete fortifications.

▶ Principal Data

<u>Caliber</u>	82 mm
<u>Length of Complete Round</u>	777 to 782 mm
<u>Weight of Complete Round</u>	4.36 kg
<u>Weight of Projectile</u>	3.68 kg
<u>Weight of Explosive</u>	0.623 kg
<u>Direct Firing Range</u>	500 m
<u>Vertical Target Dispersion at 500m</u>	$E_y \times E_z \leq 0.45 \text{ m} \times 0.45 \text{ m}$
<u>Penetration</u>	150 mm of homogeneous armour set at an angle of $68^\circ$ with the penetration rate not less than 90%
<u>Fuze</u>	MD-1F
<u>Armament</u>	82 mm recoilless gun Type 78
<u>Package</u>	
Inner packing	sealed and damp-proof container
Outer packing	wooden box
Packing number	4 rounds per box
<u>Operational Temperature</u>	-40 to +50
<u>Storage Life</u>	15 years

82 mm HEAT MK2 Shell  
for Recoilless Gun  
Type **PW78**



**82 mm HEAT MK2 Shell  
for Recoilless Gun  
Type 78**



► **General Description**

This Shell is a finned rocket-assisted HEAT ammunition launched from the recoilless gun. It is the improved version of the 82mm HEAT MK1 Shell for recoilless Gun Type 78. The warhead is more powerful and the fuze has the self-destruction device. It is mainly used to destroy armoured targets and reinforced concrete fortifications.

► **Principal Data**

<u>Caliber</u>	82 mm
<u>Length of Complete Round</u>	783 to 788 mm
<u>Weight of Complete Round</u>	4.36 kg
<u>Weight of Projectile</u>	3.68 kg
<u>Weight of Explosive</u>	0.656 kg
<u>Direct Firing Range</u>	500 m
<u>Vertical Target Dispersion at 500m</u>	$E_y \times E_z \leq 0.45 \text{ m} \times 0.45 \text{ m}$
<u>Penetration</u>	180 mm of homogeneous armour set at an angle of 68° with the penetration rate not less than 90%
<u>Fuze</u>	DRD10
<u>Package</u>	
Inner packing	sealed and damp-proof container
Outer packing	wooden box
Packing number	4 rounds per box
<u>Operational Temperature</u>	-40 to +50
<u>Storage Life</u>	15 years



120 mm Anti-bunker Rocket  
Type **PF98**



## 120 mm Anti-bunker Rocket Type **PF98**



### ► General Description

It is composed of a rocket body and a rear cylinder. The rocket body is composed of a shaped-charge precursor warhead, a fuze, a second warhead, a motor and foldable fins. The precursor creates a hole in the reinforced concrete wall and the second warhead then passes through the hole to detonate inside. It is mainly used to destroy bunkers, field fortifications.

### ► Principal Data

<u>Caliber</u>	120 mm
<u>Total Weight</u>	9.20 kg
<u>Rocket Weight</u>	7.6 kg
<u>Total Length</u>	960 mm
<u>Power</u>	a) The rocket can penetrate 1,000mm of reinforced concrete wall, clearing a path for follow-up warhead with diameter of no less than 35mm to penetrate the target structure b) The close lethal radius of the follow-up warhead is not less than 6 m
<u>Ground Dispersion at 300m</u>	Ex X Ey ≤0.35 m x 0.35 m
<u>Fuze</u>	DRD10A
<u>Armament</u>	120 mm anti-tank rocket launcher Type PF98 for battalion 120 mm anti-tank rocket launcher Type PF98 for company
<u>Package</u>	
<u>Inner packing</u>	sealed and damp-proof container
<u>Outer packing</u>	glass fiber reinforced plastic box
<u>Operational Environment</u>	
<u>Temperature</u>	-40 to+50
<u>Altitude</u>	≤3,000 m
<u>Storage Life</u>	15 years

120 mm Fuel-air Explosive Rocket  
Type **PF98**



**120 mm Fuel-air Explosive  
Rocket  
Type PF98**



► **General Description**

This rocket is a full-caliber rocket with foldable fins, launched from the rocket launcher. The FAE warhead is used to destroy field fortifications on the ground or semi-underground, observation posts and ordinary buildings and to wipe out the effectives inside fortifications and building. It can also be used to destroy oil storage depots, ammunition storage depots, barracks, various vehicles, command posts, artillery positions, communication centers, etc.

► **Principal Data**

<u>Caliber</u>	120 mm
<u>Total Weight</u>	9.05 kg
<u>Rocket Weight</u>	7.5 kg
<u>Total Length</u>	827 mm
<u>Power</u>	a) The overpressure is not less than 0.10 MPa at a distance of 5 m from the burst center in the open area. b) The rocket can create a hole in the brick wall. c) the rocket can destroy a room of 90m <sup>3</sup> when it is shot into the room through the window.
<u>Max Firing Range (at an elevation of 28°)</u>	≥1,800 m
<u>Vertical Target Dispersion at 300 m</u>	Ex × Ey ≤0.35 m×0.35 m
<u>Fuze</u>	DRAD07A
<u>Armament</u>	120mm anti-tank rocket launcher Type PF98 for battalion 120mm anti-tank rocket launcher Type PF98 for company
<u>Package</u>	
Inner packing	sealed and damp-proof container
Outer packing	glass fiber reinforced plastic box
<u>Operational Environment</u>	
Temperature	-40 to +50
Altitude	≤3,000 m
<u>Storage Life</u>	10 years

120 mm Multi-purpose Rocket  
Type **PF98**



120 mm Multi-purpose  
Rocket  
Type **PF98**



► General Description

This rocket is a full-caliber rocket with foldable fins, launched from the rocket launcher. The warhead has anti-armour, anti-personnel and incendiary functions as well as follow-up anti-personnel and incendiary functions. It is mainly used to destroy infantry fighting vehicles, light armoured vehicles, firearms and equipment.

► Principal Data

<u>Caliber</u>	120 mm
<u>Total Weight</u>	9.05 kg
<u>Rocket Weight</u>	7.5 kg
<u>Total Length</u>	827 mm
<u>Power</u>	a) The rocket can penetrate 40 mm of armor steel plate set at an angle of 55°, clearing a path for more than 120 follow-up damage elements and incendiary elements weighing 0.5 g each. b) The close lethal radius of the warhead is not less than 25 m with secondary incendiary effect.
<u>Max. Firing Range (at an elevation of 28°)</u>	≥1,800 m
<u>Ground Dispersion at Max. Firing Range</u>	
<u>Longitudinal</u>	$E_x / X \leq 1/100$
<u>Lateral</u>	$E_z \leq 5 \text{ m}$
<u>Fuze</u>	DRD11A
<u>Armament</u>	120 mm anti-tank rocket launcher Type PF98 for battalion 120 mm anti-tank rocket launcher Type PF98 for company
<u>Package</u>	
<u>Inner packing</u>	sealed and damp-proof container
<u>Outer packing</u>	glass fiber reinforced plastic box
<u>Operational Environment</u>	
<u>Temperature</u>	-40 to +50
<u>Height above sea level</u>	≤3,000 m
<u>Storage Life</u>	15 years

60mm HE Mortar Bomb  
Type **63**



## 60mm HE Mortar Bomb Type 63



### ► General Description

60mm HE Bomb Type 63 is fit for mortar whose caliber is 60mm and the chamber pressure less than  $260 \text{ kg/cm}^2$ . It can be fired at large elevation angle to destroy targets behind hills. The main purpose is to kill enemy's effective strength.

### ► Principal Data

#### Armament

Total Weight

Max. Range

Mean Max. Chamber Pressure

Dispersion at Max. Range

Lethal Radius of Effective Fragments

Fuze

Ambient Temperature

Storage Life

Quantity

Inner Package

#### **60 mm Mortar Type 63**

1.33 kg

1,470 m

$260 \text{ kg/mm}^2$

$r_x \leq 1/00$ ;  $r_y \leq 1/180$

9.8 m (actually 11.2 m)

MP-1B

-40~+50

10 years

6 rounds per wooden box

the fuse and propellant are placed in plastic, the bomb is bareness



60mm HE Mortar Bomb  
Type **WW90A**



## 60mm HE Mortar Bomb Type **WW90A**



### ► General Description

60mm HE Mortar Bomb Type WW90A is characterized by long range and high accuracy. The main purpose is to kill enemy's effective strength. It can be fired at large elevation angle to destroy targets behind hills.

### ► Principal Data

#### ***Armament***

Total Weight

Total Length

Chamber Pressure With Full Charge

Explosive

Max. Range

Range With Special Charge

Intensive Killing Radius of Effective Fragments

Dispersion at Max. Range

Fuze

Ambient Temperature

Storage Life

Quantity

Inner Package

Outer Package

#### ***60mm Mortar Type WW90***

2.3 kg

400 mm

84 MPa

TNT

5,500 m

6,060 m

20 m

$rx \leq 1/130$ ;  $ry \leq 1/250$

MP-1B or MP-11A or Type 541

-40~+50

15 years

6 rounds per wooden box

sealed aluminum-plastic bag under vacuum, then placed in a high-density plastic case together with fuze

wooden box

60mm HE Mortar Bomb  
Type **WW90B**



**60mm HE Mortar Bomb  
Type WW90B**



► **General Description**

60mm HE Mortar Bomb Type WW 90B is mainly used to kill enemy's effective strength. It can be fired at large elevation angle to destroy targets behind hills. It is applicable to mortar whose caliber between 60.75mm to 660.85mm.

► **Principal Data**

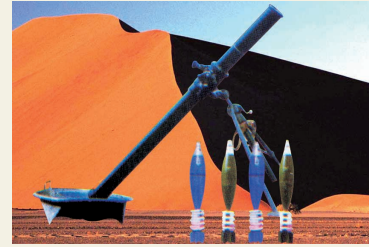
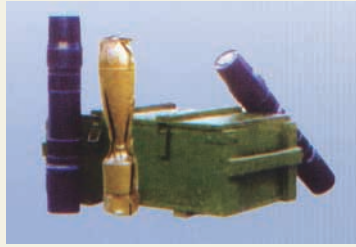
**Armament**

	<b>Mortar Type 63</b>	<b>Mortar Type W83</b>	<b>Mortar Type W90</b>
Charge No.	0# ~4#	0# ~6#	0# ~8#
Total Length (Mm)	348	348	348
Total Weight (Kg)	1.82	1.82	1.82
Pressure In Bore With Full Charge (Kg/cm)	≤260	≤430	≤850
Max. Range (M)	1,800	3,200	4,500
Min. Range (M)	100	100	100
Intensive Killing of Effective Fragments Radius (M)	15	15	15
Dispersion at Max. Range	rx≤1/130; ry≤1/250		
Fuze	MP-5D	MP-5D	MP-5D
Ambient Temperature ( )	-40~+50	-40~+50	-40~+50
Storage Life	10 years	10 years	10 years
Quantity	6 rounds per wooden box		
Inner Package	the fuze and propellant are placed in plastic, the bomb is bareness		

81 mm HE Mortar Bomb  
Type **W87**



## 81mm HE Mortar Bomb Type **W87**



### ▶ General Description

81mm Mortar HE Bomb Type W87 is designed to kill or wound effectives and suppress firing points in enemy's forward lines. It can be fired at large angle of elevation to kill personnel and destroy military instruments on the other side of the hills.

### ▶ Principal Data

#### ***Armament***

Total Weight

Muzzle Velocity with Full Charge

Max. Bore Pressure

Explosive

Max. Range

Intensive Killing Radius of Effective Fragments

Dispersion at Max. Range

Ambient Temperature

Storage Life

Quantity

Inner Package

Outer Package

#### ***81mm Mortar Type W87***

4.2 kg

312 m/s

73.5 Mpa

TNT

≥5,600 m

22 m

$rx \leq 1/130$ ;  $ry \leq 1/250$

-40~+50

15 years

6 rounds per wooden box

sealed aluminum-plastic bag under vacuum, then placed in a high-density plastic case together with fuze wooden box

81 mm Incendiary Mortar Bomb  
Type **W87**



**81mm Incendiary Mortar Bomb  
Type W87**



▶ **General Description**

81mm Incendiary Mortar Bomb Type W87 has the same trajectory, firing table and propellant as those of 81mm HE Bomb Type W87. It is used to set fire from long distance to enemy's battle positions.

▶ **Principal Data**

***Armament***

Total Weight

Charge No.

Muzzle Velocity With Full Charge

Max. Bore Pressure

Max. Range

Burning Time

Dispersion Radius of Kindlings

No. of Kindlings

Burning Power

Dispersion at Max. Range

Fuze

Quantity

Inner Package

Outer Package

***81mm Mortar Type W87***

4.2 kg

No.0~No.8

312 m/s

73.5 Mpa

≥5,600 m

≥60 s

≥20 m

12

can burn through wooden packing box over 17mm in thickness

$r_x \leq 1/130$ ;  $r_y \leq 1/250$

MS94 time fuze

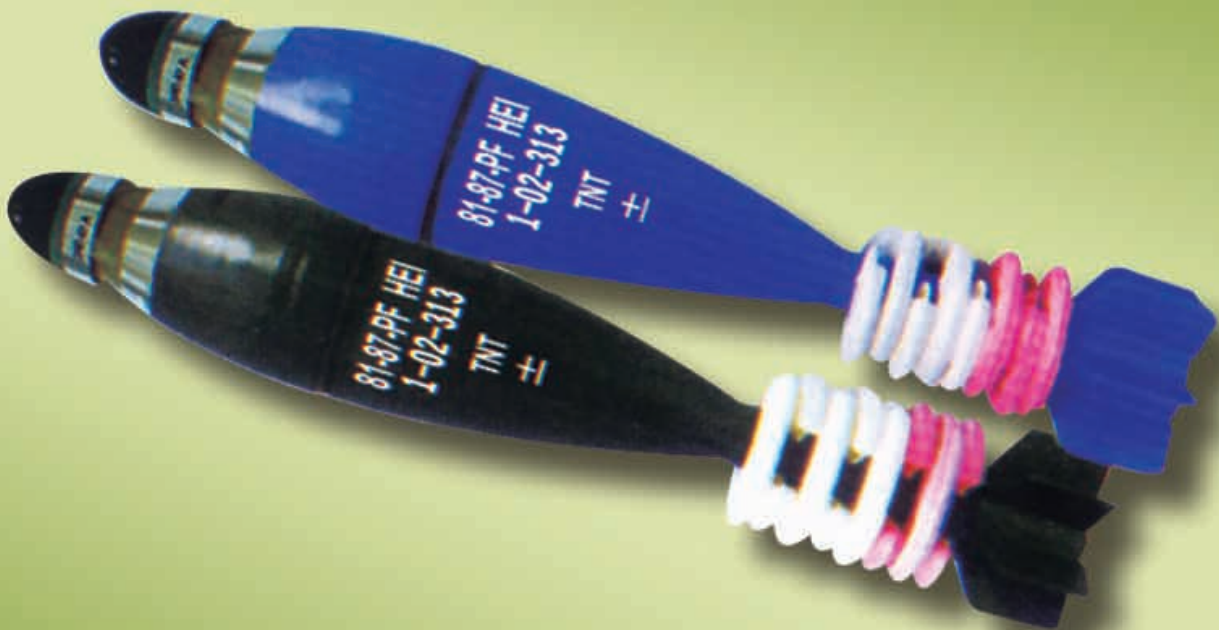
6 rounds per wooden box

sealed aluminum-plastic bag under vacuum, then placed in a high-density plastic case together with fuze

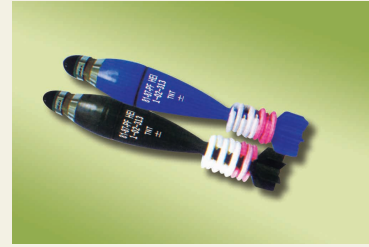
wooden box



81 mm Prefragmented  
Incendiary Mortar Bomb  
Type **W87**



## 81mm Prefragmented Incendiary Mortar Bomb Type **W87**



### ▶ General Description

81mm Prefragmented Incendiary Mortar Bomb Type W87 has the same trajectory and fire table as W87-81mm HE Bomb. It contains more than 1100 steel-balls to kill enemy's living force and destroy military instruments. It also has effective incendiary effect on easy burnt matter such as oil, hay, and cotton etc.

### ▶ Principal Data

#### ***Armament***

Total Weight

Charge No.

Max. Bore Pressure

Explosive

Max. Range

Dispersion at Max. Range

Intensive Killing Radius of Effective Fragments

Incendiary Radius

Fuze

Storage Life

Total Barrel Length

Quantity

Inner Package

Outer Package

#### ***81mm Mortar Type W87***

4.2 kg~4.3kg

No.0~No.8

73.5 MPa

TNT

≥5,600 m

$rx \leq 1/130$ ;  $ry \leq 1/250$

≥27 m

≥18 m

proximity fuze

15 years

1,400 mm

6 rounds per wooden box

sealed aluminum-plastic bag under vacuum, then placed in a high-density plastic case together with fuze

wooden box

81 mm HE-I Mortar Bomb  
Type **W87**



## 81mm HE-I Mortar Bomb Type **W87**



### ► General Description

81mm High Explosive Incendiary Mortar Bomb Type W87 is developed on the basis of HE bomb. Besides killing personnel and destroying military instruments, it also has effective incendiary effect to easy burnt matter such as oil, hay, and cotton etc..

### ► Principal Data

#### ***Armament***

Total Weight

Charge No.

Muzzle Velocity with Full Charge

Max. Bore Pressure

Explosive

Max. Range

Intensive Killing Radius of Effective Fragments

Incendiary Radius

Dispersion at Max. Range

Fuze

Ambient Temperature

Storage Life

Quantity

Inner Package

Outer Package

#### ***81mm Mortar Type W87***

4.2 kg

No.0~No.8

312 m/s

73.5 Mpa

TNT

≥5,600 m

22 m

15 m

$rx \leq 1/130$ ;  $ry \leq 1/250$

MP-8 or MP-11

-40~+50

15 years

6 rounds per wooden box

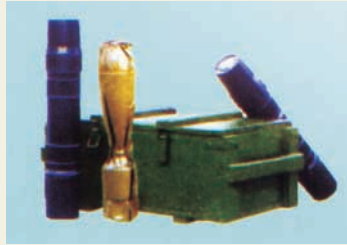
sealed aluminum-plastic bag under vacuum, then placed in a high-density plastic case together with fuze

wooden box

81mm Long Range  
HE Mortar Bomb  
Type **W87**



81mm Long Range  
HE Mortar Bomb  
Type **W87**



▶ General Description

81mm Long Range HE Mortar Bomb Type W87 is designed to kill or wound effectives and suppress firing points in enemy's forward lines. It is characterized by its long range and high accuracy. It can be fired at large angle of elevation to kill personnel and destroy military instruments on the other side of the hills.

▶ Principal Data

***Armament***

Total Weight

Total Length

Max. Bore Pressure

Explosive

Max. Range

Intensive Killing Radius of Effective Fragments

Dispersion at Max. Range

Fuze

Ambient Temperature

Storage Life

Quantity

Inner Package

Outer Package

***81mm Mortar Type W87***

4.6 kg

500.2 mm

73.5 Mpa

TNT

6,000 m

22 m

$rx \leq 1/130$ ;  $ry \leq 1/250$

MP-5B

-40~+50

15 years

6 rounds per wooden box

sealed aluminum-plastic bag under vacuum, then placed in a high-density plastic case together with fuze

wooden box

81mm Cargo Mortar  
Bomb  
Type **W87**



## 81mm Cargo Mortar Bomb Type **W87**



### ► General Description

81mm Cargo Mortar Bomb Type W87 is a kind of high efficient area-damaging ammunition. It carries 12 bomblets with dual purpose: destroying tanks, armored vehicles, and killing the enemy's effective strength.

### ► Principal Data

#### ***Armament***

Total Weight

5.5 kg

Max. Range

≥4,800 m

Min. Range

≤700 m

Pellets Per Round

12

Firing Rate

15~25 rounds/min.

Dispersion at Max. Range

$rx \leq 1/100$ ;  $ry \leq 1/200$

Dispersion Area (7~10 Rounds)

120 m×80 m

Diameter of Bomblets

φ 34.7 mm

Power of Bomblet

can penetrate 50 mm armored steel plate,  
and have a certain aftereffect

Antipersonnel Radius

≥5 m

Fuze

MS94 electronics time fuze or  
DRS11 mechanical time fuze

Ambient Temperature

-40~+50

Storage Life

15 years

Quantity

6 rounds per wooden box

Inner Package

sealed aluminum-plastic bag under vacuum,  
then placed in a high-density plastic case  
together with fuze

Outer Package

wooden box



82mm He Mortar Bomb  
Type **53**



## 82mm HE Mortar Bomb Type 53



### ▶ General Description

82mm HE Mortar Bomb Type 53 is fit for mortar whose caliber is 82mm and the chamber pressure less than 43 MPa. It can be fired at large elevation angle to destroy targets behind hills. It's main purpose is to kill enemy's effective strength.

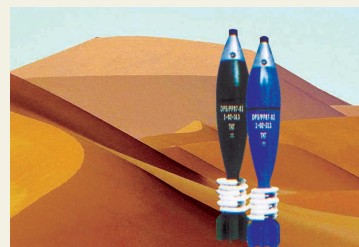
### ▶ Principal Data

<u>Weight</u>	3.158 kg
<u>Caliber</u>	82 mm
<u>Charge No.</u>	No.0~No.3
<u>Max. Range</u>	3040 m
<u>Max. Bore Pressure</u>	43 MPa
<u>Dispersion at Max. Range</u>	$r_x \leq 1/100$ ; $r_y \leq 1/200$
<u>Lethal Radius of Effective Fragments</u>	15.6 m
<u>Fuze</u>	MP-1B
<u>Ambient Temperature</u>	-40~+50
<u>Storage Life</u>	15 years
<u>Quantity</u>	6 rounds per wooden box

82mm Mortar HE Bomb  
Type **PP87**



## 82mm HE Mortar Bomb Type **PP87**



### ► General Description

82mm HE Mortar Bomb Type PP87 is designed to kill or wound effectively and suppress firing points in enemy's forward lines. It can be fired at large elevation angle to destroy targets behind hills. It is applicable to mortar whose caliber between 81.9mm to 82.2mm.

### ► Principal Data

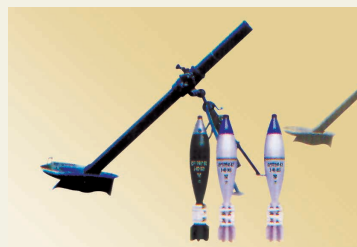
#### *Armament*

	<b>82mm Mortar Type PP87</b>	<b>82mm Mortar Type 53</b>
Total Weight (Kg)	4.175	4.175
Muzzle Velocity With Full Charge (M/s)	265	230
Max. Bore Pressure (Mpa)	≤56.9	≤43.0
Explosive	TNT	TNT
Max. Range (M)	4,659	3,800
Min. Range (M)		100
Lethal Radius of Effective Fragments (M)		22
Dispersion at Max. Range	rx≤1/150; ry≤1/300	
Fuze	MP-8 or MP-11	MP-5C
Ambient Temperature	-40~+50	
Storage Life (Years)	15	10
Quantity	6 rounds per wooden box	
Inner Package	sealed aluminum-plastic bag under vacuum, then placed in a high-density plastic case together with fuze	
Outer Package	wooden box	

82mm HE-I Mortar Bomb  
Type **PP87**



## 82mm HE-I Mortar Bomb Type **PP87**



### ▶ General Description

82mm High Explosive Incendiary Mortar Bomb Type PP87 is developed on the basis of HE Bomb. Besides killing personnel and destroying military instruments, it has effective incendiary effect to easy burnt matter such as oil, hay, and cotton etc.. It is applicable to mortar whose caliber between 81.9mm to 82.2mm.

### ▶ Principal Data

#### ***Armament***

Total Weight

Caliber

Charge No.

Muzzle Velocity With Full Charge

Max. Bore Pressure

Explosive

Max. Range

Min. Range

Intensive Killing Radius of Effective Fragments

Incendiary Radius

Dispersion at Max. Range

Fuze

Ambient Temperature

Storage Life

Quantity

Inner Package

Outer Package

#### ***82mm Mortar Type PP87***

4.175 kg

82 mm

0~6<sup>#</sup>

265 m/s

56.9 Mpa

TNT

4,659 m

100 m

22 m

15 m

$rx \leq 1/150$ ;  $ry \leq 1/300$

MP-8 or MP-11

-40~+50

15 years

6 rounds per wooden box

sealed aluminum-plastic bag under vacuum, then placed in a high-density plastic case together with fuze

wooden box

82mm Prefragmented  
Incendiary Mortar Bomb  
Type **PP87**



**82mm Prefragmented  
Incendiary Mortar Bomb  
Type PP87**



► **General Description**

82mm Prefragmented Incendiary Mortar Bomb Type PP87 is developed on the basis of Long Range HE Bomb Type PP87. It's trajectory and firing table are coincident with the HE Bomb. The bomb contains more than 1100 Steel-Balls to kill enemy's living forces and destroy military instruments. It also has effective incendiary effect to easy burnt matter such as oil, hay, and cotton etc..

► **Principal Data**

***Armament***

Total Weight

Charge No.

Max. Range

Dispersion at Max. Range

Intensive Killing Radius of Effective Fragments

Incendiary Radius

Fuze

Ambient Temperature

Storage Life

Quantity

Inner Package

Outer Package

***82mm Mortar Type PP87***

4.2 kg

0~6#

≥5,600 m

$rx \leq 1/150$ ;  $ry \leq 1/300$

≥27 m

≥18 m

proximity fuze Type MD83A

-40~+50

15 years

6 rounds per wooden box

sealed aluminum-plastic bag under vacuum, then placed in a high-density plastic case together with fuze

wooden box



82mm Long Range  
Incendiary Mortar Bomb  
Type **PP87**



**82mm Long Range  
Incendiary Mortar Bomb  
Type PP87**



▶ **General Description**

82mm Long Range Incendiary Mortar Bomb Type PP87 is designed on the basis of Long Range HE Bomb Type PP87. It's trajectory is coincident with the HE Bomb. It is used to set fire to enemy at long distance.

▶ **Principal Data**

**Armament**

Total Weight

Muzzle Velocity With Full Charge

Max. Bore Pressure

Max. Range

Burning Time

Dispersion Radius of Kindlings

No. of Kindlings

Dispersion at Max. Range

Fuze

Ambient Temperature

Storage Life

Quantity

Inner Package

Outer Package

**82mm Mortar Type PP87**

4.2 kg

294 m/s

54.9 Mpa

≥5,600 m

≥60 s

≥15 m

12

$r_x \leq 1/150$ ;  $r_y \leq 1/300$

MS94 or MS11

-40~+50

15 years

6 rounds per wooden box

sealed aluminum-plastic bag under vacuum, then placed in a high-density plastic case together with fuze

wooden box

82mm Long Range HE  
Mortar Bomb  
Type **PP87**



82mm Long Range HE  
Mortar Bomb  
Type **PP87**



▶ General Description

82mm Long Range HE Mortar Bomb Type PP87 is characterized by long range and high precision. It can be fired at large elevation angle to destroy targets behind hills. It is applicable to mortar whose caliber between 81.9mm to 82.2mm.

▶ Principal Data

***Armament***

Total Weight

Total Length

Charge No.

Muzzle Velocity With Full Charge

Max. Range

Max. Bore Pressure

Explosive

Intensive Killing Radius of Effective Fragments

Dispersion at Max. Range

Fuze

Ambient Temperature

Storage Life

Quantity

Inner Package

Outer Package

***82mm Mortar Type PP87***

4.2 kg

482 mm

No.0~No.6

294 m/s

≥5,600 m

56.9 MPa

TNT

22 m

$rx \leq 1/150$ ;  $ry \leq 1/300$

MP-11

-40~+50

15 years

6 rounds per wooden box

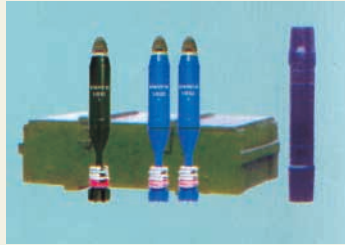
sealed aluminum-plastic bag under vacuum, then placed in a high-density plastic case together with fuze

wooden box

82mm Cargo Mortar  
Bomb  
Type **PP87**



## 82mm Cargo Mortar Bomb Type **PP87**



### ► General Description

82mm Cargo Mortar Bomb Type PP87 is a kind of high efficient area-damaging ammunition. It carries 12 bomblets with dual purpose: destroying tanks, armored vehicles, and killing the enemy's effective strength.

### ► Principal Data

#### ***Armament***

Total Weight

5.5 kg

Max. Range

≥4,600 m

Min. Range

≤700 m

Pellets Per Round

12

Dispersion at Max. Range

$rx \leq 1/100$ ;  $ry \leq 1/200$

Dispersion Area (7~10 Rounds)

120 m×80 m

Diameter of Bomblets

φ 34.7 mm

Power of Bomblet

can penetrate 50 mm armored steel plate, and have a certain aftereffect

Antipersonnel Radius

≥5 m

Fuze

MS94 electronics time fuze or MS11 mechanical time fuze

Ambient Temperature

-40~+50

Storage Life

15 years

Quantity

6 rounds per wooden box

Inner Package

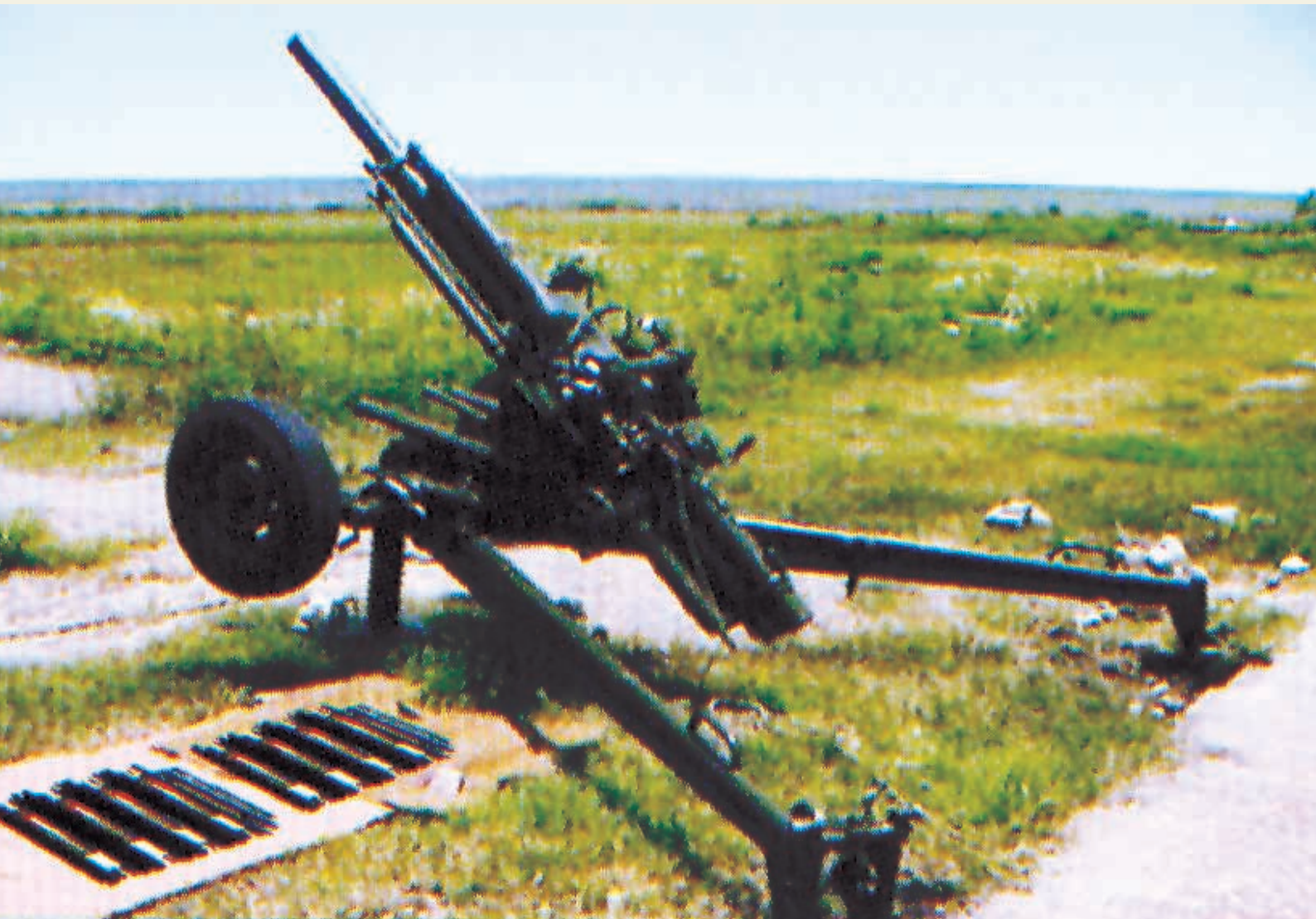
sealed aluminum-plastic bag under vacuum, then placed in a high-density plastic case together with fuze

Outer Package

wooden box

82mm Rapid Fire HE  
Mortar Bomb

Type **PP02**



82mm Rapid Fire HE  
Mortar Bomb  
Type **PP02**



► General Description

82mm Rapid Fire HE Mortar Bomb Type PP02 is fit for 82mm rapid fire mortar which can launch 4 rounds within 1.5s. It can be fired at zero elevation angle to destroy armored vehicles. It can also be fired at large elevation angle to destroy targets behind hills.

► Principal Data

***Armament***

Weight

***82mm Rapid Fire Mortar Type PP02***

3.158 kg

Max. Range

4,100 m

Max. Chamber Pressure

≤48 MPa

Dispersion at Max. Range

$rx \leq 1/100$ ;  $ry \leq 1/200$

Lethal Radius of Effective Fragments

15.6 m

Firing Rate

4 rounds/1.5s

Fuze

mechanical impact fuze type MP-11D

Ambient Temperature

-40~+50

Storage Life

15 years

Quantity

8 rounds per wooden box

Inner Package

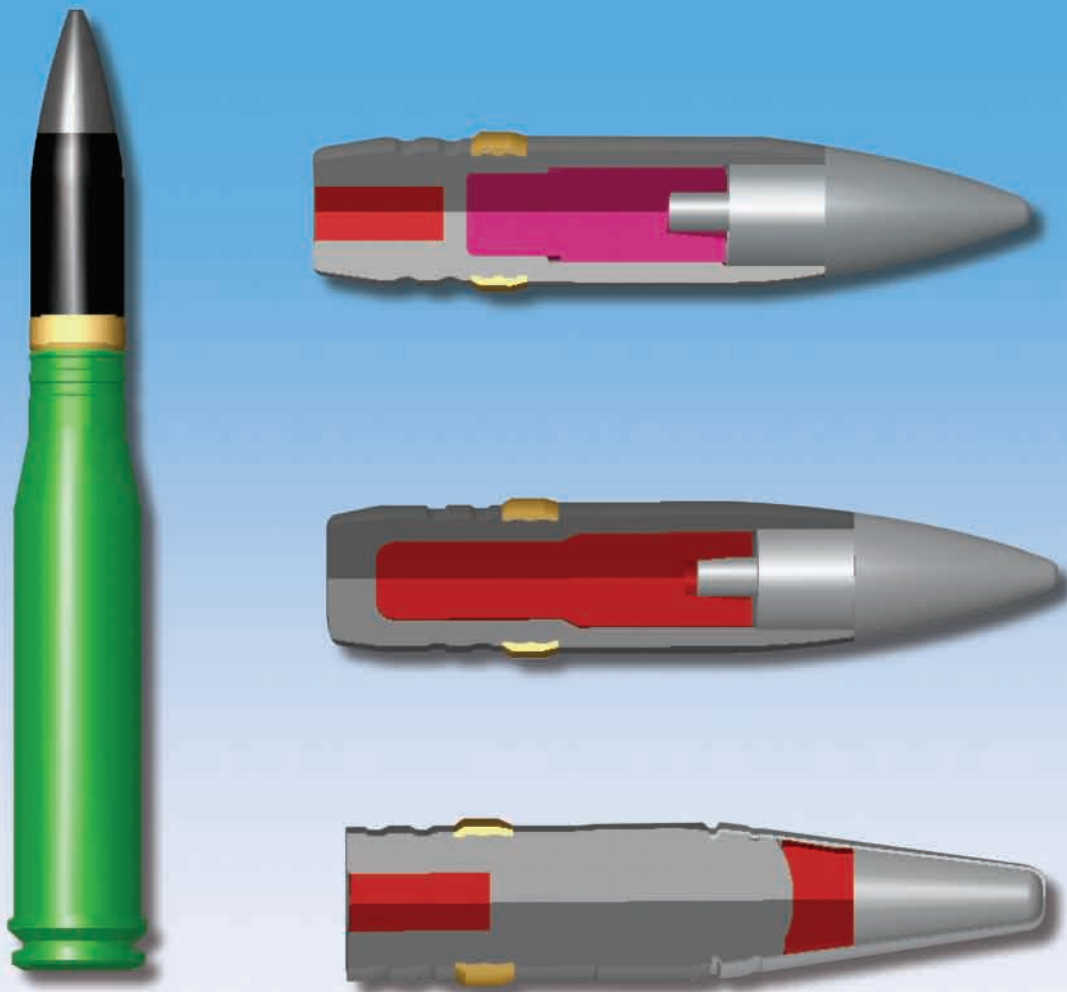
sealed aluminum-plastic bag under vacuum,  
then placed in a high-density plastic case  
together with fuze

Outer Package

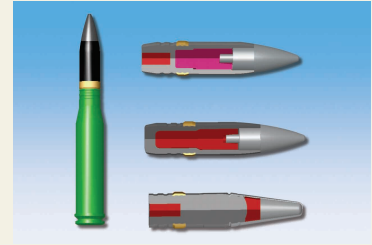
wooden box



23mm Anti-aircraft Gun  
Shell Series  
Type **85**



23mm Anti-aircraft Gun  
Shell Series  
Type **85**



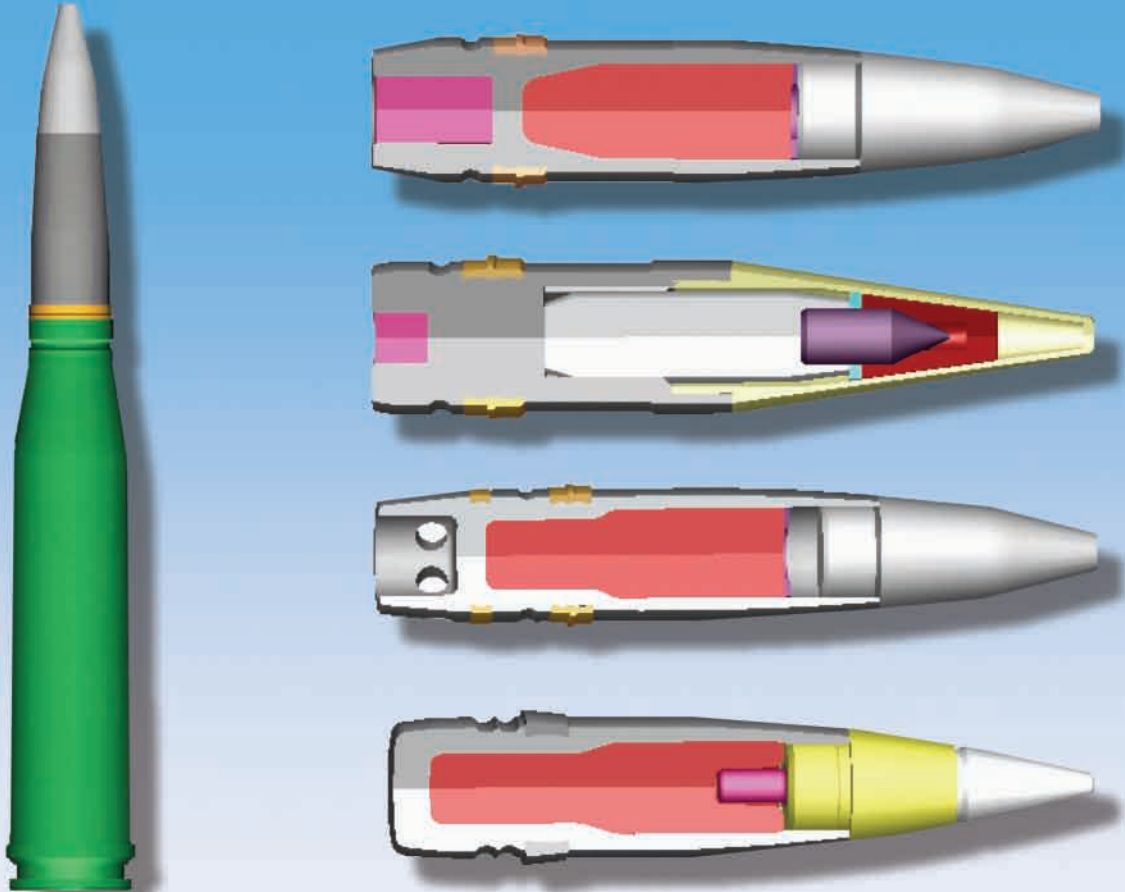
► General Description

23mm Anti-Aircraft Gun Shell Series include HEI-T, HEI, API-T and AP-T ammo. It can be fired by 23mm Twin Barrel Automatic Anti-aircraft Gun Type 3Y-23 and 23mm Quadri-Barrel Self-propelled Anti-aircraft Gun System Type 3CY-23-4 against low altitude and ultra-low altitude air targets within 2,500m in distance and bellow 1,500m in altitude.

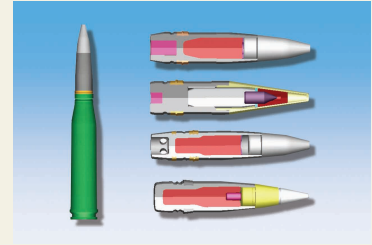
► Principal Data

		<i>23mm HEI-T</i>	<i>23mm HEI</i>	<i>23mm API-T</i>	<i>23mm AP-T</i>
Caliber		23 mm			
Muzzle Velocity		970 m/s			
Mass	Complete Round	450 g			
	Projectile	About 190 g			
	Propellant	About 78 g			
Complete Length		236 mm			
Chamber Pressure		≤304 MPa			
600m Dispersion (Elevation×direction)		≤0.5 m×0.5 m			≤0.45 m 0.45 m
Mass of Explosive		13 g	19 g	—	—
Tracer Burn Time		≥5 s		≥5 s	≥1.5 s
Self-destruction Time		5 s ~11s	5 s ~11s	—	—

25mm Anti-aircraft Gun  
Shell Series  
Type **PG87**



25mm Anti-aircraft Gun  
Shell Series  
Type **PG87**



► General Description

25mm Anti-Aircraft Gun Shell Series Type PG87 include HEI, HEI-T, API-T and APDS-T ammo. It can be fired by 25mm Towed Anti-aircraft Gun Weapon System Type PG87 and 4-Barrel 25mm Self-Propelled Anti-aircraft Gun Weapon System Type PGZ95 to against low altitude and ultra-low altitude fighters and unmanned aircrafts as well as cruise missiles and armored helicopters of 2,800m~3,200m in slant distance and 2,000m~2,500m in altitude.

► Principal Data

		<i>25mm APDS-T</i>	<i>25mm HEI Type</i>	<i>25mm HEI Type</i>	<i>25mm HEI-T</i>	<i>25mm API-T</i>
Muzzle Velocity		1,355 m/s	1,075 m/s	1,050 m/s		
Mass	Complete Round	574 g	670 g	690 g		
	Projectile	≈135 g	230 g	250 g		
	Propellant	121 g	114 g	About 114 g		
Complete Length		266 mm	285 mm	283 mm		
Chamber Pressure		≤338.8 MPa	≤314 MPa	≤314MPa		
1000m Dispersion (Elevation×direction)		≤0.7m×0.6m	≤0.7m×0.7m	≤0.9m×0.8m		≤0.7m×0.5m
Tracer Burning Time		≥1.5s	—	—	≥5 s	≥5 s
Mass of Explosive		—	23 g	30g	19g	—
Amour-piercing Performance		1000m away, 25mm/60°, homogeneous plate, rate of penetrating ≥80%	—	—	—	1,000m away, 20mm/30°, homogeneous plate, rate of penetrating ≥90%
Self-destruction Time			4s~14s	5s~12s	5s~12s	—
Muzzle Safety Distance			≥18 m	≥20 m	≥20 m	—

# 30mm

Gun Shell Series



## 30mm Gun Shell Series



### ► General Description

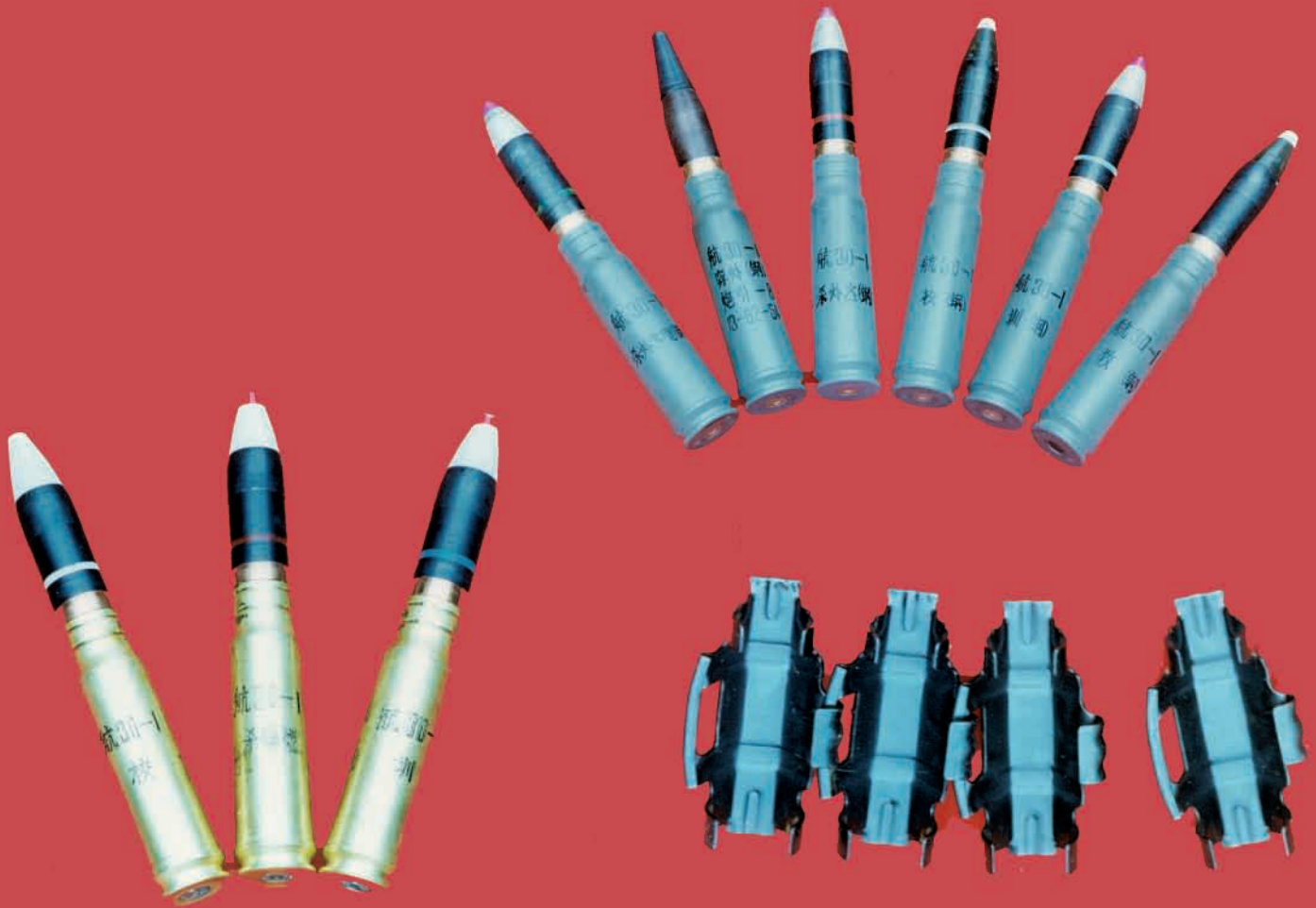
30mm Gun Shell Series include HEI ammo for 30mm Automatic Gun, APDS-T, HEI, APDS-T & TP-T for 6-Barrel 30mm Naval Gun Type AK630, HEI & AP-T for 30mm Aerial Gun. This ammunition series is mainly used to against low-altitude flying target of 3000m~4000m in slant distance and 1,500m~2,000m in altitude.

### ► Principal Data

	<i>HEI For 30mm Automatic Gun</i>	<i>APDS-T for 30mm Automatic Gun</i>	<i>HEI For 6-Barrel 30mm Naval Gun</i>	<i>TP-T For 6-Barrel 30mm Naval Gun</i>	<i>APDS-T For 6-Barrel 30mm Naval Gun</i>	<i>HEI For 30mm Aerial Gun</i>	<i>AP-T For 30mm Aerial Gun</i>	
Muzzle Velocity	960 m/s	1180 m/s	890 m/s	880 m/s	1,285 m/s	860 m/s	860 m/s	
Chamber Pressure	≤360 MPa	≤360 MPa	≤330 MPa	≤330 MPa	≤330 MPa	≤330 MPa	≤330 MPa	
Complete Length	293 mm	282 mm	293 mm	293 mm	261.5 mm	284 mm	292 mm	
Mass	Complete Round	839 g	754 g	839 g	839 g	670 g	820 g	839 g
	Projectile	389 g	286 g	389 g	389 g	220 g	389 g	400 g
	Explosive	48 g	—	48g	—	—	48g	—
	Propellant Charge	120 g	140 g	117 g	117 g	121 g	114 g	114 g
1000m Dispersion (Elevation×direction)	≤1 m×1 m	≤0.4 m×0.4 m	≤1 m×1 m	≤1 m×1 m	≤0.4 m×0.4 m	≤1 m×1 m	≤1 m×1 m	
Tracer Burn Time	—	≥1.5 s	—	≥10 s	≥1.5 s	—	≥3.5 s	
Muzzle Safety Distance	20 m	—	20 m	—	—	20 m	—	
Self-destruction Time	9 s~24 s	—	13 s~25 s	—	—	5 s~18 s	—	
Armor-piercing Performance (1000m Away)	—	On 30mm/60° homoge- neous plate,rate of penetrating ≥90%	—	—	On 30mm/60° homoge- neous plate,rate of penetrating ≥90%	—	On 20mm homoge- neous plate,rate of penetrating ≥80%	
Model of Primer	Mechanical primer	Mechanical primer	Electro- primer	Electro- primer	Electro- primer	Electro- primer	Electro- primer	

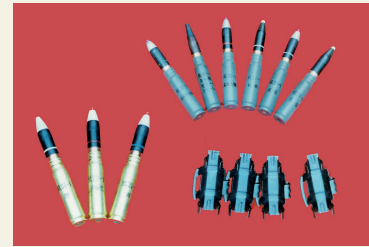
# 30mm

Aerial Gun Shell



# 30mm

Aerial Gun Shell



## ▶ General Description

This 30mm Aerial Gun Shell can be used by 30mm Aerial Automatic Gun Type I and 30mm Aerial Automatic Gun Type HP-30 (Russian made).

## ▶ Principal Data

Caliber	30 mm
Total Length	264~267 mm
Total Weight	0.8316 Kg
Muzzle Velocity	800±10 m/s
Average Max. Chamber Pressure	298.90 MPa
Single-shot Max. Chamber Pressure	323.40 MPa
Dispersion at 600m	
Azimuth Error	<0.5 m
Elevation Error	<0.5 m



35mm Anti-Aircraft Gun  
Shell Series  
Type **PG99**



**35mm Anti-Aircraft Gun  
Shell Series  
Type PG99**



▶ **General Description**

35mm Anti-aircraft Gun Shell Series Type PG99 include HEI, HEI-T, HEI-FRAG, and SAPHEI-T. They can be fired by Oerlikon 35mm Anti-aircraft Gun GDF Series. It is mainly used to attack low-altitude airplane, armored helicopters and parachuted soldiers of 4,000m in slant distance and 3,000m in altitude.

▶ **Principal Data**

		<i>35mm HEI</i>	<i>35mm HEI-T</i>	<i>35mm SAPHEI-T</i>	<i>35mm HEI-FRAG</i>
Muzzle Velocity		1,175 m/s			
Mass	Complete Round	1,580 g	1,565 g	1,580 g	1,580 g
	Projectile	550 g	535 g	550 g	550 g
	Explosive	112 g	98 g	18 g	80 g
	Propellant	About 330 g			
Time of Flight		1,000 m		0.96 s	
		2,000 m		2.18 s	
		3,000 m		3.80 s	
		4,000 m		6.05 s	
Complete Length		387 mm			
Chamber Pressure		≤385 MPa			
1000m Dispersion (Elevation×direction)		≤0.68 m×0.68 m			
Tracer Burn Time		—	≥4 s	≥2.2 s	—
Muzzle Safety Distance		18 m			
Time of Self-destruction		6s~16 s			
Armor-piercing Performance		—	—	On 40mm plate, rate of penetrating ≥90%	—
Fuze		Nose fuze	Nose fuze	Base fuze	Base fuze

# 37/57mm

BB/HE Shell  
for AA Automatic Gun



## 37/57mm

BB/HE Shell  
for AA Automatic Gun



### ► General Description

The 37mm BB/HE Shell is provided for 37mm AA Automatic Gun Type 55, twin 37mm AA Automatic Gun Type 65 or Type 74. The 57mm BB/HE Shell is provided for 57mm AA Automatic Gun Type 59. They are used to engage low-altitude targets within the height of 5,000 m. They can also be used against surface targets.

### ► Principal Data

	<b>37mm BB/HE Shell</b>	<b>57mm BB/HE Shell</b>
<u>Projectile Length</u>	174 mm	219 mm
<u>Shell Length</u>	383.08~385.79 mm	530.4~534.4 mm
<u>Projectile Weight</u>	0.732 kg	2.8 kg
<u>Shell Weight</u>	1.417 kg	6.4 kg
<u>Muzzle Velocity</u>	866 m/s	1,000 m/s
<u>Max. Chamber Pressure</u>	≤2,800 kg/cm <sup>2</sup>	≤3,100 kg/cm <sup>2</sup>
<u>Max. Slant Range</u>	9,000 m	16,000 m
<u>Fire Range (Vertical)</u>	5,000 m	7,650 m
<u>Fuze Type</u>	Liu-2G	Liu-2G or DRD34
<u>Fuze Self-explosive Time</u>	15~19 s	22~26 s
<u>Explosive Charge</u>	Aluminum - , 36 g	Aluminum - , 159 g
<u>Primer Type</u>	Di-14	Di-5
<u>Ambient Temperature</u>	-40 °C~+50 °C	-40 °C~+50 °C
<u>Shelf Life</u>	10 years	10 years
<u>Packing</u>		
-Type	Wooden box	Wooden box
-Dimension	443×429×225 mm	604×486×184 mm
-Quantity	20	4
-Gross Weight	38 kg	36 kg

105mm Tank Gun  
HEAT-T Shell  
Type **DTP1**



105mm Tank Gun  
HEAT-T Shell  
Type **DTP1**



▶ General Description

As a kind of fixed-type fin-stabilized shaped-charge HEAT ammunition, the 105mm HEAT-T Type DTP1 Shell is primarily used on 105mm tank gun to attack various main battle tanks, other armored targets and cement works. The fragments from the projectile will also cause casualties to personnel.

▶ Principal Data

<u>Caliber</u>	105 mm
<u>Length of Projectile</u>	647 mm max.
<u>Length of Whole Cartridge</u>	991 mm max.
<u>Weight of Projectile</u>	10.25 kg
<u>Weight of Whole Cartridge</u>	about 22 kg
<u>Weight of Explosive</u>	1.03 kg
<u>Weight of Propellant</u>	about 5.1 kg
<u>Muzzle Velocity</u>	1,173.5 m/s
<u>Chamber Pressure</u> +21	≤436.40 MPa
+52	≤509.46 MPa
<u>Max. Vertical &amp; Lateral Dispersion (At A Range of 1,000m)</u>	≤210 cm
<u>Tracing Distance</u>	> 1,000 m
<u>Penetration</u>	180 mm/60° homogenous armor plate

▶ Package

<u>Type</u>	metal container
<u>Quantity</u>	2 rounds
<u>Gross Weigh</u>	76 kg/case
<u>Dimensions</u>	1,168×460×238 mm

105mm Tank Gun  
HEAT-T Shell

Type **DTP1A**



105mm Tank Gun  
HEAT-T Shell  
Type **DTP1A**



### ▶ General Description

As a new kind of HEAT ammunition, the 105mm HEAT-T Shell Type DTP1A has an anti-reactive-armor ability. The influence of reactive-armor on the metal jet can be eliminated reliably by the penetration-explosion delayer before the arrival of metal jet at the armor of the tank. It is primarily used to attack various main battle tanks, other armored targets and cement works.

### ▶ Principal Data

<u>Caliber</u>	105 mm
<u>Length of Projectile</u>	719mm max.
<u>Length of Whole Cartridge</u>	1,063mm max.
<u>Weight of Projectile</u>	10.42 kg
<u>Weight of Whole Cartridge</u>	about 22 kg
<u>Weight of Explosive</u>	1.03 kg
<u>Weight of Propellant</u>	about 5.1 kg
<u>Muzzle Velocity</u>	1,164 m/s
<u>Chamber Pressure</u> +21	≤436.40 MPa
+52	≤509.46 MPa
<u>Max. Vertical &amp; Lateral Dispersion (At A Range of 1,000m)</u>	≤210 cm
<u>Tracing Distance</u>	> 1,000 m
<u>Penetration</u>	PBFY-1 reactive armor + 180 mm/60°homogenous armor plate

### ▶ Package

<u>Type</u>	metal container
<u>Quantity</u>	2 rounds
<u>Gross Weigh</u>	78 kg/case
<u>Dimensions</u>	1,240×460×238 mm



105mm Tank Gun  
HEAT-T Shell  
Type **DTP2**



**105mm Tank Gun  
HEAT-T SWhell  
Type **DTP2****



▶ **General Description**

As a kind of fixed-type fin-stabilized shaped-charge HEAT ammunition, the 105mm HEAT-T Cartridge Type DTP2 has better firing accuracy and greater penetration power. It is primarily used to attack various main battle tanks, other armored targets and cement works.

▶ **Principal Data**

<u>Caliber</u>	105 mm
<u>Length of Projectile</u>	727 mm max.
<u>Length of Whole Cartridge</u>	1,066 mm max.
<u>Weight of Projectile</u>	10.86 kg
<u>Weight of Whole Cartridge</u>	about 22.5 kg
<u>Weight of Explosive</u>	1.2 kg
<u>Weight of Propellant (M30 15/7)</u>	about 5.0 kg
<u>Muzzle Velocity</u>	1,140 m/s
<u>Chamber Pressure +15</u>	≤436 MPa
<u>+50</u>	≤495 MPa
<u>Max. Vertical &amp; Lateral Dispersion (At A Range of 1,000m)</u>	≤0.25 m×0.25 m
<u>Tracing Distance</u>	> 1,000 m
<u>Penetration</u>	180 mm/65°homogenous armor plate
<u>Ambient Temperature</u>	-40°C ~ +50°C

▶ **Package**

<u>Inner Package</u>	glass fiber reinforced plastics container
<u>Outer Package</u>	wooden case
<u>Quantity</u>	2 rounds
<u>Gross Weight</u>	78 kg/case
<u>Dimensions</u>	1,240×460×290 mm

# 130mm

BB/RABB Shell



# 130mm BB/RABB Shell



## ► Principal Data

	<b>130mm BB Shell</b>	<b>130mm RABB Shell</b>
Length of Shell (unfuzed)	650 mm	686 mm
Length of Shell (fuzed)	795 mm	831 mm
Payload	3.58 kg TNT	2.84 kg TNT
Round Weight (fuzed)	32.2 kg	32.8 kg
Type of Grain of BB Unit	Pyrotechnic	Multiple
Fuze Type	DRL11B	DRL11B
Material of Cartridge Case	Brass	Brass
Length of Cartridge Case	846 mm	846 mm
Weight of Filled Case	24.5 kg	24.5 kg
Weight of Propellant (full charge)	13 kg	13.3 kg
Type of Propellant	Double base-3, 23/1	Double base-3, 23/1
Type of Primer	D-5	D-9A
Average Chamber Pressure	311.85 MPa	311.85 MPa
Muzzle Velocity	947 m/s	940 m/s
Range	38,000 m	45,000 m
Lethal Radius	33.7 m	30 m
Quantity of Effective Fragments	2,450 pcs	1,720 pcs
Ambient Temperature	-40 °C~+55 °C	-40 °C~+55 °C
Shelf Life	15 years	15 years
Package	1 rd in wooden case (995×454×282 mm)	1 rd in wooden case (995×454×282 mm)

Hand Grenade

Type **82-2/86P**



## Hand Grenade Type **82-2/86P**



### ▶ General Description

The Hand Grenade Type 82-2 is a hand-thrown weapon which produces more than 280 fragments on detonation, and Type 86P is a plastic-bodied hand grenade with 1,600 steel balls inside, which themselves may scatter over a lethal radius of 6 meters.

### ▶ Principal Data

#### **Type 82-2**

Diameter	48 mm
Weight	260 g
Length	85 mm
Lethal Radius	6 m
Delay Time	2.8~3.8 s
Safety Radius	30 m

#### **Type 86P**

Diameter	52 mm
Diameter of Steel Ball	2.5~3.0 mm
Weight	260 g
Lethal Radius	6 m
Quantity of Steel Balls	1,600
Delay Time	2.8~3.8 s
Safety Radius	25 m

Medium Size  
Smoke-producing Can  
Type **FYG03**



Medium Size  
Smoke-producing Can  
Type **FYG03**



▶ General Description

Medium Size Smoke-producing Can Type FYG03 is used during attack and defence to generate smoke screen to protect troops' movement and targets from detection and to confuse the enemy's artillery fire and command.

▶ Principal Data

<u>Diameter</u>	163 mm
<u>Height</u>	219 mm
<u>Weight</u>	8.3 kg
<u>Lgniting Mode</u>	By electricity or by scraping
<u>Lgniting Time</u>	5~8 seconds
<u>Smoke-producing Time</u>	8~12 minutes
<u>Length of Smoke Screen</u>	50~100 metres
<u>Width</u>	15~20 metres



Demolition Perforator  
Type **GBP142**



Demolition Perforator  
Type **GBP142**



### ▶ General Description

Demolition perforator is mainly used to perform quick perforation for constructing fortifications on rocky, frozen or stone-interlined earth sections in plateaus, extreme cold areas, mountains or jungles where mechanical operations are not suitable.

### ▶ Principal Data

<u>Overall Dimensions of Warhead</u>	Φ152 mm×207 mm
<u>Gross Weight</u>	4.8 kg
<u>Charge Weight</u>	2.5 kg

### ▶ Main Characteristics

**Power:**

The average effective penetrating depth is about 1,500 mm on frozen and stone-interlined earth and on rocks with a Protodrakonov scale of hardness  $f \leq 4$ .

The average effective penetrating depth is about 800~1,000 mm on rocks with a Protodrakonov scale of hardness  $f \leq 6$ .

The average effective penetrating depth is about 500~700 mm on rocks with a Protodrakonov scale of hardness  $f \leq 10$ .

**Pattern of ignition:** electric igniter or self-made igniter

**Safe distance:** 30m (in a trench or under a blindage);  
50m (without cover)