



Basic Identification of Ammunition in Ukraine

V. 8.0 English Edition 02.07.2025







Introduction

Це англійська версія «Посібник з базової ідентифікації боєприпасів в Україні В. 8.0 02.07.2025». Вона була розроблена для того, щоб допомогти українським вибухотехнікам / саперам / розмінувальникам співпрацювати з їхніми міжнародними колегами. Уся інформація в посібниках подана з максимальною відповідністю, щоб полегшити розуміння один одного під час спільної роботи.

This is the English version of "Посібник з базової ідентифікації боєприпасів в Україні В. 8.0 02.07.2025". It has been developed in order to assist Ukrainian EOD/deminers/sappers when working with their international counterparts. All information in the guides are aligned to match as closely as possible in order to facilitate translation while working together in the field.

This guide includes only those ammunition that were discovered on the territory of Ukraine. Missing data is marked by "INFORMATION NEEDED".

For the most current Ukrainian and English versions of this guide go to:

https://ukr.bulletpicker.com/id-guides.html
You can also scan the QR code here ----->



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Table of Contents (Page 1)

Warnings

Aerial Bombs

- Aircraft Bombs
- Drone Bombs
- Cluster Bombs

Hand Grenades

- Antipersonnel
- Antitank
- Chemical

Submunitions

- Immediate Action
- Scatterable Mines

- Smoke
- Misc.

Rifle Grenades

Land Mines

- Antipersonnel
- Antitank
- Boobytrap Devices

Special Mines

- Limpet Mines
- Signal Mines

Sea/River Mines

Anti-landing Mines

^{**}Click on any blue link to go to the appropriate section!**

Table of Contents (Page 2)

Mortar (Projectiles)

- 60mm
 - 82mm
- 140mm

- 81mm <u>120</u>mm
- 240mm

Small Arms Ammunition

- 12.7-14.5mm
- 20mm

Projectiles

- <u>76-82mm</u> <u>152mm</u> • 23mm
- 25mm • 155mm • 85mm
- 170mm • 30<u>mm</u> • 100mm
- 203mm • 35mm **105mm**
- 37mm 115mm
- 40mm • <u>120mm</u>
- 43mm 122mm
- 57mm 125mm
- 130mm 73mm

^{**}Click on any blue link to go to the appropriate section!**

Table of Contents (Page 3)

Multiple Launch Rocket Systems (MLRS)

- 122mm MLRS 9K51 "Grad" / 9K51M "Tornado-G"
- 220mm MLRS 9K57 "Hurricane"
- 300mm MLRS 9K58 "Smerch" / **9K515** "Tornado-S"

Rockets and Launchers

- <u>57mm</u>
- 122mm
- <u>70mm</u>
 - <u>127mm</u>
- 80mm 128-140mm
- 82mm
- 150-212mm
- 220mm
- <u>240-266mm</u>
- <u>300mm</u>

RPG

- RPG-7 Series
- Carl Gustav
- <u>40mm</u>
- 4<u>5-58mm</u>
- 64-66mm
- 68mm

- <u>70-75</u>mm
- 80-85.1mm
- 90mm
- 93mm
- 103mm
- 105mm
- 106-125mm

Click on any blue link to go to the appropriate section!

Table of Contents (Page 4)

Guided Missiles

- Air-to-Air
- Air-to-Surface
- Surface-to-Air
- Antitank
- Surface-to-Surface
- Cruise Missiles
- Ballistic Missiles

Aerial Drones

- Kamikaze Drones
- Armed Drones

Ground Drones

- Kamikaze Drones
- Armed Drones

Modified/Homemade
Ammunition

Mine Clearance
Systems

Demolition Materials

Fuzes

- Base Detonating (BD)
- Bomb
- Guided Missile
- Drone
- Submunition
- Grenade
- Mine
- Sabotage Devices
- Point Detonating (PD)
- Point Initiating Base Detonating (PIBD)
- Proximity
- Time

Propellant

Pyrotechnics

Miscellaneous

Click on any blue link to go to the appropriate section!

Warnings

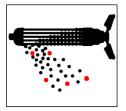
In many munition entries there will be found warning symbols. These indicate that the munition has a specific hazard which makes it more dangerous in a particular way. Under normal, calm conditions Unexploded Ordnance (UXO) and Explosive Remnants of war (ERW) should never be needlessly approached! These warning symbols are provided to assist the user of this guide in making decisions when they are in complex or hostile environments where approaching UXO/ERW is necessary.



Self-destruct / **Timer** (**seconds to hours**): This munition has a timer or is designed to self-destruct after a short delay lasting between several seconds and up to 24 hours. Take into consideration that the duration of time may last much longer or shorter than designed due to damage, defects, or old age. These munitions can detonate at any time without warning, do not approach!



Self-destruct / **Timer** (days to months): This munition has a timer or is designed to self-destruct after a long delay lasting somewhere between one day and up to several months. Take into consideration that the duration of time may last much longer or shorter than designed due to damage, defects, or old age. These munitions can detonate at any time without warning, do not approach!



Cluster Munition or Submunition: This munition is a cluster munition or submunition. Assume that more items like it may be in the area. Use a clear and proven exit route from the area.



Acoustic Sensor: This munition possess an acoustic sensor that reacts to sound waves. Do not approach! If discovered close to your location, leave the area in the quietest way possible.

Warnings



Seismic Sensor: This munition possess a seismic sensor that reacts to vibrations in the ground. Do not approach! If discovered close to your location, leave the area walking as softly as possible. When walking, make the pattern of your footsteps irregular.



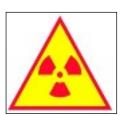
Infrared or Laser Sensor: This munition possess an infrared or laser sensor that reacts to a person or vehicle passing in front of it. Do not approach! If discovered close to your location, leave the area by a route which leads directly away from the munition and does not pass in front of the sensor.



Magnetic Sensor: This munition possess a magnetic sensor that reacts to the presence of metal and metallic objects. Do not approach! If discovered close to your location, leave the area by a route which leads directly away from the munition. Do not move any metallic objects that are already in the area.



Toxic Chemical: This munition contains a toxic chemical which is designed to incapacitate, injure, or kill. Do not approach! If discovered close to your location, don protective equipment and evacuate to an upwind location as quickly as possible.



Radioactive: This munition contains a radioactive substance such as depleted uranium. Do handle it without protective equipment, especially if the munition is damaged. If the munition has been in a fire, consider the ashes and debris to also be radioactive.

Warnings



Incendiary or Thermobaric: This munition is designed to produce an incendiary or thermobaric effect. It contains a filler such as magnesium, white phosphorus, thermite mixture, thermobaric explosive, etc. Consider this when handling or disposing of these munitions!



Cocked Striker: This munition contains a striker, firing pin or detonator that is held in a ready-to-fire position under spring tension. When the munition is armed or damaged, jarring or striking it may release the striker and cause the munition to function. Do not move by hand! Never attempt to transport by vehicle!



Extremely Sensitive to Movement: This munition, when armed, is extremely sensitive to being moved. It may be because of piezoelectric crystals in the fuze, an anti-handling feature, the design of the fuze, or other reasons. Familiarize yourself with the technical details of the munition before conducting any actions!



Boobytraps: All munitions found on the battlefield may be boobytrapped, but these are more likely than others to be rigged with anti-lift or anti-disturbance devices. Do not move by hand when first encountered! First, use a rope of sufficient length to remotely pull, shake, and tumble these munitions. After remotely moving, wait a period of time before approaching the munition.



Unknown Hazards: There is not enough information known about this munition to ascertain all of its hazards – treat it with the utmost caution!

These are aerial bombs dropped from manned fixed-wing and rotary aircraft that are intended to impact with either the surface of the earth or targets on the surface of the earth. In general, they are larger in size than the bombs dropped from drones. They may be guided or unguided, and can have a wide variety of fillers/payloads.

If they contain multiple smaller munitions (submunitions) they are found in the <u>cluster bombs</u> section.













UMPK

Note: The UMPK is a guidance package attached to both aerial bombs and cluster bombs of different sizes. A variety of fuzes may be used with the bombs. When the remains of a UMPK are discovered, take all precautions until the type of munition and fuzes used with it are confirmed!

Country of origin: russia











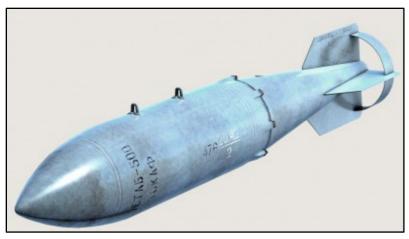
UMPB D-30SN (HE)

Diameter: 300mm Length: ~3.03m Wingspan: ~2m Tailspan: ~600mm

Weight: **INFORMATION NEEDED**Note: Note: It is claimed that this munition can also be fired from

300mm MLRS.





BETAB-500

(HE-concrete piercing)

Diameter: 350mm Length: 2200mm Weight: 478 kg

Country of origin: russia





BETAB-500ShP

(HE-concrete piercing)

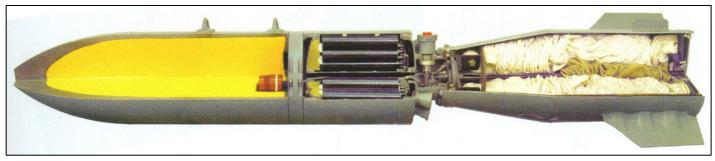
Diameter: 325mm Length with Parachute Assembly: 2510mm

Weight: 380 kg Country of origin:

russia









OFAB-100-120 (HE-frag)

Diameter: 273mm

Length without fuze: 1065mm

Tailspan: 345mm Weight: 123 kg

Country of origin: russia



OFAB-250-ShN

(HE-frag)

Diameter: 325mm Length: 1966mm Tailspan: 410mm Weight: 268 kg

Country of origin: russia









OFAB-250-ShL

(HE-frag)

Diameter: 325mm Length: 1991mm Tailspan: 410mm Weight: 266 kg









GBU-39/B SDB (HE penetrator)

Diameter of body: 190mm

Length: 1.8m Wingspan: 1.37m Weight: ~120 kg Country of origin: USA







OFAB-250-270 (HE-frag)

Diameter: 325mm Length: 1456mm Weight: 268 kg

Note: May be used with or without a UMPK. Country of origin: russia





<u>OFAB-500U</u>

(HE-frag)

Diameter: 400mm Length: 2300mm Weight: 515 kg





FAB-250 M-54

(HE)

Diameter: 325mm Length: 1490mm Tailspan: 399mm Weight: 230 kg

Country of origin: russia









FAB-500T

(HE)

Diameter: 400mm

Length without fuze: 2425mm

Weight: 477 kg

Note: May be used with or

without a UMPK.





FAB-500 M-62

(HE)

Diameter: 400mm Length: 2470mm Weight: 497 kg

Note: May be used with or without a

UMPK.

Country of origin: russia









FAB-500ShN

(HE)

Diameter: 450mm Length: 2190mm Weight: 513 kg

Country of origin: russia





489-581

FAB-500ShL

(HE)

Diameter: 450mm Length: 2220mm Weight: 515 kg











FAB-1500 M-54 (HE)

Diameter: 570mm

Length without fuze: 2310mm

Weight: 1550 kg

Note: May be used with or

without a UMPK.

Country of origin: russia





FAB-3000 M-54

(HE)

Diameter: 820mm

Length without fuze: 3320mm

Tailspan: 1002mm Weight: 3067 kg

Note: May be used with or without a UMPK. May contain two fuzes in the

tail as well as one in the nose.









OFZAB-500

(HE-frag-incendiary)

Diameter: 450mm Length: 2385mm Weight: 500 kg

Note: May be used with or without a UMPK.
Country of origin: russia







ODAB-500PM/PMV (FAE)

Diameter: 500mm Length: 2280/2380mm Weight: 520/525 kg

Note: These contain a highly corrosive, toxic and flammable

liquid.

Country of origin: russia













ODAB-1500

(FAE)

Diameter: INFORMATION NEEDED
Length: INFORMATION NEEDED
Weight: INFORMATION NEEDED

Note: May be used with or without a

UMPK.





UPAB-1500B-E / K029BE

(HE-concrete piercing)

Diameter: 400mm Length: 5.05m Weight: 1525 kg

Country of origin: russia





KAB-500Kr (HE-concrete piercing)

Diameter: 350mm Length: 3.05m

Tailfin Span: 750mm

Weight: 520 kg Country of origin:

russia





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KAB-1500LG-F and KAB-1500LG-Pr (HE and HE-concrete piercing)

Diameter: 580mm Length: 4.28m Tailspan:

> Folded: 850mm Unfolded: 1300mm

Weight: 1525 kg



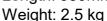
These are aerial bombs dropped from unmanned fixed-wing and rotary-wing drones that are intended to impact with either the surface of the earth or targets on the surface of the earth. In general, they are smaller in size than the bombs dropped from aircraft. They may be guided or unguided, and can have a wide variety of fillers.

This section contains drone bombs which are manufactured by a nation, company, or organization in large quantities and have been standardized. Drone bombs which are improvised can be found in the Modified/Homemade Ammunition section.



OFSP-2.5-A133 (HE-frag)

Diameter: 60mm Length: 380mm



Country of origin: russia



FPV Drones





OFSP-1.7-A133 / OFSP-1.7-A133 (variant) (HE-frag)

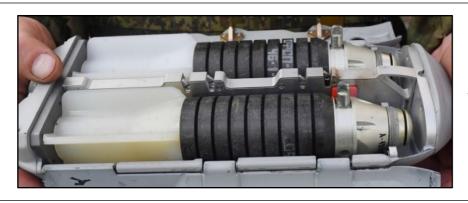
Diameter: 55mm Length: 305 / 340mm

Weight: 1.7 kg

Note: The variants differ by the

length of their tailfins. Country of origin: russia





OFSP-08-A133

(HE-frag)

Diameter: 48mm Length: 230mm Weight: 0.83 kg

Country of origin: russia



UAV Orlan-10



OFSP-05-A133 / B133 (HE-frag)

Diameter: 48mm Length: 190mm Weight: 0.5 kg





KZSP-0.5 (HEAT)

Diameter: INFORMATION NEEDED

Length: **INFORMATION NEEDED**

Weight: 0.5 kg

Country of origin: russia







UB-75HE

Diameter: 75mm Length: 500mm Weight: 2 kg

Country of origin: Ukraine



Punisher





AZB-5 (incendiary)

Diameter of body: 110mm Length without fuze: 528mm

Wingspan: 153mm Weight: ~5 kg

Country of origin: russia,

Ukraine







Qaem-5 (HE-antistructure)

Diameter: 152mm Length: 1080mm Weight: 20 kg Country of origin: Iran



UAV Mohajer-6 / ER-860



MAM-L (HEAT)

Diameter of body: 160mm

Length: 1m

Wingspan: INFORMATION NEEDED

Country of origin: Turkey





Bayraktar TB2





MAM-C (HE-frag)

Diameter of body: 70mm

Length: 970mm

Wingspan: **INFORMATION**

NEEDED

Country of origin: Turkey

Bayraktar TB2





KAB-20 (HE-frag)

Diameter of body: 130mm

Length: 900mm Wingspan: 350mm Weight: 21 kg

Country of origin: russia





UAB-20 OFL

(HE-Frag)

Diameter of body: 135mm

Length: INFORMATION NEEDED Wingspan: INFORMATION

NEEDED

Weight: INFORMATION NEEDED

Country of origin: russia





Forpost UAV

Orion-E UAV



120mm TB (thermobaric)

Diameter: 120mm

Length with UT M18 fuze:

371mm

Weight: 13.1 kg

Country of origin: Serbia

Cluster bombs are aviation bombs that contain and release smaller munitions (submunitions).

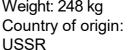


RBK-250 PTAB-2.5M (HEAT submunitions)

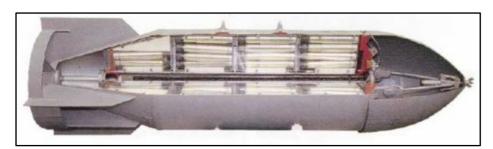
Diameter: 325mm Length: 2120mm Wingpan: 410mm Weight: 248 kg



PTAB-2.5M







RBK-500 PTAB-1M

(HEAT submunitions)

Diameter: 450mm Length: 1955mm Weight: 427 kg

Country of origin: USSR





OFAB-500ShR (HE-frag submunitions)

Diameter: 450mm Length: 2500mm Weight: 509 kg



Country of origin: russia

Submunitions from OFAB-500ShR













RBK-500 ShOAB-0.5 (fragmentation submunitions)

Diameter: 450mm Length: 1950mm Wingspan: 570mm Weight: 334 kg

Note: May be used with or without a

UMPK.

Country of origin: russia



ShOAB-0.5





RBK-500 AO-2.5RT and RBK-500 AO-2.5RTM (HE-frag submunitions)

Diameter: 450mm Length: 2500mm

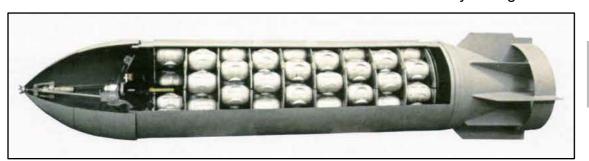
Wingspan: **INFORMATION**

NEEDED Weight: 504 kg

Country of origin: russia







AO-2.5PT / AO-2.5PTM



OAB-2.5RT

RBK-500U OAB-2.5RT

(fragmentation submunitions)

Diameter: 450mm Length: 2495mm

Wingspan: **INFORMATION**

NEEDED

Weight: 500 kg



Submunitions are smaller munitions which are designed to be released, deployed, or ejected from a carrier munition in order to cover a larger target area.

Immediate action submunitions are submunitions which have been designed to produce an immediate effect upon a target or target area when they are deployed from their carrier munition. They may or may not have a short delay self-destruct feature (seconds to minutes). Their carrier munitions include cluster bombs, projectiles, mortars, rockets, guided missiles, and dispensers.



3B30 (HEAT / fragmentation)

Diameter: 43mm Length: 128mm

Country of origin: russia







9N210/9N235 (HE-frag)

Diameter: 65mm Length: 263mm

Country of origin: russia



220mm MLRS





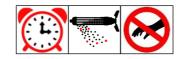


PTAB-1M (HEAT)

Diameter: 42mm Length: 251mm Tailspan: ~72mm

Country of origin: USSR

RBK-500 PTAB-1M









PTAB-2.5M (HEAT)

Diameter: 68mm Finspan: 87-90mm Length with fuze: 395mm

Length without fuze: 332-339mm

Country of origin: USSR

RBK-250 PTAB-2.5M

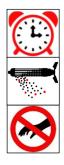




<u>9N24</u> (HE-frag)

Length: 373mm Diameter: 88mm

Country of origin: USSR



Tochka-U





9N247M (HE-frag incendiary)

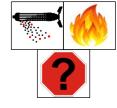
Length: INFORMATION

NEEDED

Diameter: **INFORMATION**

NEEDED

Country of origin: USSR



220mm MLRS



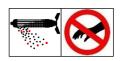




<u>9N277</u> (HE-frag)

Length: ~300mm Diameter: ~190mm Country of origin: USSR

220mm MLRS







9N288 (HE-frag)

Diameter: **INFORMATION NEEDED** Length: INFORMATION NEEDED

Country of origin: russia







Submunitions from OFAB-500ShR (HE-frag)

Diameter: ~350mm

Length of Small Submunition: ~440mm Length of Large Submunition: ~540mm

Country of origin: russia







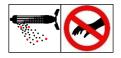




M42 and M46 (HEAT)

Diameter: 38mm Height: 81mm

Country of origin: USA



155mm M483A1

155mm M864





O-10 / 3-O-10 (HE-frag)

Diameter: 65mm Length: 300mm

Country of origin: russia



240mm 3VO11/3O8



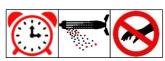




O16 / 3-O-16 (HE-frag)

Diameter: 52mm Length: 193mm

Country of origin: russia



152mm O-13





O25 / 3-O-25 (HEAT)

Length: INFORMATION NEEDED

Length without fuze: 72mm

Diameter: 44mm

Country of origin: russia











9N730 (HE-frag)

Length: INFORMATION NEEDED

Diameter: ~116mm Country of origin: russia

> **Iskander and** Iskander-M



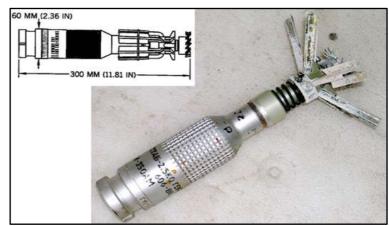






PTAB-2.5KO (HEAT)

Length: ~300mm Diameter: 60mm Country of origin: russia







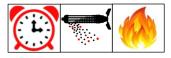


ZAB-0.15 (incendiary)

Diameter: 23mm Length: 135mm

Note: This submunition is often modified to be dropped from a drone.

Country of origin: russia











ZAB-2.5 (incendiary)

Diameter: 68mm Length: 244-249mm

Note: There are 3 different variants. The newer versions are

grey, older versions are red-brown.

Country of origin: russia



Diameter: 48-50mm

Length without fuze: 153-158mm

Length with fuze: 182-188mm

Tailspan: 58.5-60

Note: This submunition is often modified to be

dropped from a drone. Country of origin: russia









SPBE Series (EFP)

Diameter of warhead:

185mm

Length: 384mm

Country of origin: russia

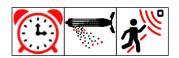






SMArt (HEAT)

Diameter:140-150mm Height: 180-200mm Country of origin: Germany



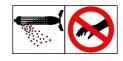
155mm «DM702»





ShOAB-0.5 (fragmentation)

Diameter of body: 64mm Country of origin: russia



RBK-500 ShOAB-0.5





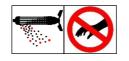
M74
(HE-frag incendiary)
Diameter of body: 59mm
Country of origin:
USA



MGM-140A ATACMS

Submunition from Kh-59MK2 and Kh-69 (HE-frag)

Diameter of body: 105mm Country of origin: russia



Kh-59MK2

Kh-69

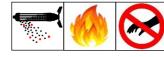






Submunition from Kh-101 (HE-frag incendiary)

Diameter: ~115mm Length: ~120mm Country of origin: russia



Kh-101















AO-2.5RT and AO-2.5RTM (HE-frag)

Diameter of body: 90mm

Length: 150mm

Country of origin: russia



RBK-500 AO-2.5RT and RBK-500 AO-2.5RTM



OAB-2.5RT (fragmentation)

Diameter: 115mm Diameter of body: 90mm

Length: 170mm

Country of origin: russia



RBK-500U OAB-2.5RT











(HEAT) Diameter: 138mm

Length of body: 141mm Country of origin: France

BONUS





155mm BONUS





North Korean submunition (model unknown)

(HEAT)

Diameter: ~38mm Length of body: 60mm Length with fuze: 89mm Country of origin: North Korea







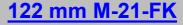


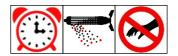




GKO (HEAT)

Diameter: 38mm Length of body: 118mm Length without fuze: 91mm Country of origin: Poland



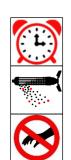






<u>M87</u> (HEAT)

Diameter: 42mm Length with fuze: 82mm Country of origin: Israel



120mm M971

Submunitions are smaller munitions which are designed to be released, deployed, or ejected from a carrier munition in order to cover a larger target area.

Scatterable mines are submunitions which have been designed to act as landmines after they are deployed from their carrier munition. They may or may not have a long delay self-destruct feature (hours to weeks). Their carrier munitions include cluster bombs, projectiles, mortars, rockets, guided missiles, dispensers, and the canisters from remote mining systems.





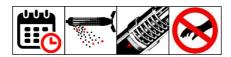
PFM-1 and PFM-1S "Petal"

(HE)

Length: 119mm Width: 64mm Thickness: 20mm

Country of origin: USSR

220mm MLRS





KSF-1F Series (HE)

Length: 480mm Diameter 140mm

Note: Different models of this canister contain different amounts

of PFM-1 and/or PFM-1S

submunitions.

Country of origin: USSR





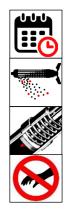


<u>PTM-1</u> (HE)

Length: 340mm Width: 70mm Height: 70mm

Country of origin: russia









PTM-3 (HEAT)

Length: 330mm Width: 84mm Height: 84mm

Country of origin: USSR

KPTM-3

Length: 480mm Diameter: 140mm

Note: A KPTM-3 canister holds one

PTM-3.

Country of origin: USSR











KRM-T / PTM-4R

140mm KIB

PTM-4 and PTM-4M (HEAT)

Length: 350mm Width: 110mm Height: 55mm

Country of origin: russia







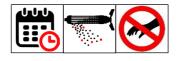


POM-2 (fragmentation)

Diameter: 63мм Height: 180мм

Note: Each POM-2 deploys 4 tripwires.

Country of origin: USSR/russia



KPOM-2

Diameter: 140mm Height: 480mm

Note: 4 mines are inside a

KPOM-2 cassette.

Country of origin: USSR/russia





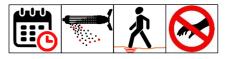




POM-3 "Medallion" (bounding, fragmentation)

Length: 190mm Diameter: 63mm

Country of origin: russia



140mm KIB





KPOM-3

Length: 500mm Diameter: 150mm

Note: 4 mines are inside a

KPOM-3 cassette. Country of origin: russia









RAAMS / M70 / M73 (HEAT)

Diameter: 127mm Height: 61mm

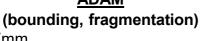
Country of origin: USA

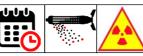


155mm M718/M741

ADAM

Height: 67mm Width: 59mm Length: 71mm





Note: Deploys 7 tripwires. Each ADAM contains a small amount of depleted uranium. Country of origin: USA



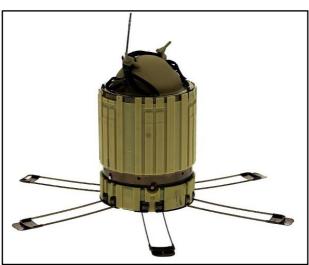
155mm M692/M731













AT2 / DM1399 (HEAT)

Diameter:103.5mm Height of body:128mm Total height: 580mm Country of origin: Germany,

Norway













Antipersonnel grenades are designed to injure or kill personnel, usually through a combination of blast and fragmentation effects. This section also includes thermobaric grenades.







<u>F-1</u> (fragmentation)

Diameter: 55mm
Total height: 116.8mm
Body Height: 86mm
Country of origin:
USSR, russia













Metal Body RGD-5 (HE-frag)

Diameter: 58.4mm
Total height: 116.8mm
Country of origin: USSR, russia











Plastic Body RGD-5 (HE-frag)

Diameter: 57mm

Total height with DVM fuze: 95mm

Height of body: 80mm Country of origin: Bulgaria













RGN (HE-frag)

Diameter: 60mm

Total height with UDZ Fuze:

114mm

Country of origin: USSR















<u>RGO</u> (**HE-frag)** neter: 60mm

Diameter: 60mm
Total height: 114mm
Country of origin: USSR















M67 (HE-frag)

Diameter: 63.5mm Height of body: 65mm Total height: 89.6mm Country of origin: USA













RG-4 (HE-frag) Diameter: 53mm Height: 84mm Country of origin: Czech







DM51 Series (HE-frag or HE)

Dimensions of Defensive

Configuration: Diameter: 57mm Length: 107mm

Dimensions of Offensive Configuration:

Diameter: 33.5mm Length: 100mm

Country of origin: Germany













DM61 Series (HE-frag)

Diameter: 57mm Total height: 103mm Country of origin: Germany





RG-60TB (thermobaric)

Diameter: 60mm

Height of body: INFORMATION NEEDED

Total height with U-517M fuze: 180mm

Country of origin: russia













GHO-1 (HE-frag)

Diameter: 56mm Total height: 95mm Country of origin: Bulgaria













<u>M72</u> (HE-frag)

Diameter: 52mm Total height: 85mm Country of origin: Belgium







RG-42 (HE-frag)

Diameter: 58mm Total height: 121mm Height of body: 71mm Country of origin: russia









MK 14 Mod 0 / ASM (HE-frag)

Diameter: 64mm Total height: 135mm Body Height: 112mm Country of origin: USA







<u>F1</u> (HE-frag)

Diameter: 58mm Total height: 96mm Country of origin: Australia











RGT-27S2

(thermobaric)

Diameter: 61mm

Total height with UZRGM fuze:

180mm

Height of body: 114mm Country of origin: Ukraine













<u>M50P3</u> (HE-frag)

Diameter: 54mm Total height: 105mm Height of body: 78mm

Country of origin: Former Yugoslavia









<u>M52P3</u> (HE-frag)

Diameter: 55mm Total height: 108mm Height of body: 79mm

Country of origin: Former Yugoslavia









OF 37 (HE-frag)

Diameter: 60mm

Total height with Mle F3 fuze:

96mm

Height of body: 83mm Country of origin: France









<u>m/963</u> (HE-frag)

Diameter: ~57mm
Total height: ~99mm
Height of body: ~76mm
Country of origin: Portugal









<u>Sirpalekäsikranaatti M/50</u> (HE-frag)

Diameter: 50mm Height of body: 94mm Total height: 125mm Country of origin: Finland







<u>M/54</u> (HE-frag)

Diameter: 57mm

Height of body: **INFORMATION**

NEEDED

Total height: 95mm

Country of origin: Denmark









RGO-78 (HE-frag)

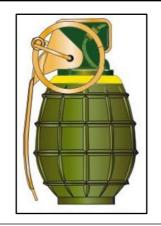
Diameter: 61mm Height of body: 80mm

Total height with DVM fuze: 95mm

Country of origin: Bulgaria







Shgr 2000 (HE-frag)

Diameter: 52mm

Height of body: INFORMATION NEEDED

Total height: 94mm Country of origin: Sweden









HGO115M-3,5

(HE)

Diameter: ~53mm
Height with fuze: ~85mm
Note: Multiple grenade
bodies can be connected
together for a greater effect.
Country of origin: Norway





MK2 MOD 44 (fragmentation) Diameter: INFORMATION NEEDED

Height of body:

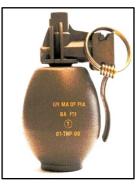


Total height with M204A2 fuze: 120mm

Country of origin: Turkey









OF F1A / LU 216 (HE-frag)

Diameter: 52mm Height of body: 67mm

Total height with Mle F13 fuze: 102mm

Country of origin:

France









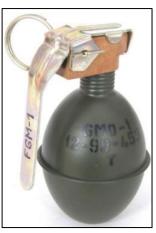
F-1 (Romania) (fragmentation)

Diameter: 56mm

Height of body: **INFORMATION NEEDED**Total height with FGM-R fuze: 100mm

Country of origin: Romania









GMO-1 / M92 (HE-frag)

Diameter: 61mm Height of body: 86mm

Total height with FGM-R fuze:

122mm

Country of origin: Romania









<u>GMM</u>

(fragmentation, HE-frag or HEAT)

Dimensions of defensive configuration:

Diameter: 48mm

Length: **INFORMATION NEEDED**Dimensions of offensive configuration:

Diameter: 40mm

Length: **INFORMATION NEEDED**Dimensions of HEAT configuration:

Diameter: 48mm

Length: INFORMATION NEEDED

Note: This grenade can be configured in three different ways: offensive, defensive,

and HEAT.

Country of origin: Romania









RGZ-89 (HE-frag)

Diameter: 59mm
Total height with
UZRGM fuze: 130mm
Height of body: 98mm
Country of origin: Poland



Antitank Grenades

Intended to defeat tanks and vehicles.

Anti-tank Grenades



RKG-3 (HEAT)

Diameter: 65mm Total length: 361mm Country of origin: USSR









RKG-3EM / RKG-3E-M (HEAT) Diameter: 78mm

Total length: 388mm Country of origin: russia



BRK-M79 (HEAT)

Diameter: 74.5mm Total length: 399mm Country of origin: Serbia





Chemical grenades contain toxic substances designed to irritate, incapacitate, or wound personnel. The toxic substances are normally released as a gas or aerosol. The amount of harm these grenades can cause varies depending on the chemical used as well as environmental factors (wind, temperature, confinement, etc.)







<u>K-51</u> (CS gas)

Diameter: 55mm
Height of body: 82mm
Height with fuze: 130mm
Country of origin: russia









RG-60AZ "Dreif-2" (riot control gas)

Diameter: 60mm Height of body: 122mm

Height with U-517M fuze: 175mm

Country of origin: russia











RGR (CS gas)

Diameter: 58mm Total height with U-517M

fuze: 175mm

Country of origin: russia











Teren-6 (CS gas)

Diameter: 61mm Height of body: 145mm Total length: 185mm Country of origin: Ukraine











RGK-60KD (CS gas, flashbang)

Diameter: 58mm Length: 173mm

Note: Contains 4 flashbang and 3 irritant

elements.

Country of origin: russia











RGK-60KD (CS gas)

Diameter: 58mm Length: 173mm

Note: Contains 7 irritant elements.

Country of origin: russia















RG-Vo (CN gas)

Diameter: 55mm Height with fuze:

INFORMATION NEEDED

Height of body: 112mm Country of origin: russia













<u>Drofa-PM</u> (riot control gas, flashbang)

Diameter: 64mm
Height with fuze: 214mm
Note: Contains 4 flashbang
and 3 irritant elements.
Country of origin: russia









ALSG272 (CS gas)

Diameter: 62mm

Height with M201A1 fuze: 152mm Height of body: **INFORMATION**

NEEDED

Country of origin: USA













UGŁ-200 and UGŁ-200/1 (CN gas)

Diameter: ~51mm Length: ~185mm

Country of origin: Poland







Smoke grenades are designed to quickly produce relatively large amounts of smoke. This smoke may be used to screen the movement of friendly forces, or it can be used for signaling and marking purposes.





L84A1/A2

(smoke / red phosphorus)

Diameter: 60mm Height of body: 101mm Total height: 129mm

Country of origin: Germany, UK













<u>L132A2</u> (smoke)

Diameter: 55mm Length of body: ~100mm Total length: 124mm Country of origin: UK











DG-1 (smoke)

Diameter: 51mm Height of body: 131mm

Total height: **INFORMATION NEEDED**

Country of origin: Ukraine





RDG-M (smoke / red phosphorus)

Length:170mm Diameter: 58mm

Country of origin: russia









RDG-P (smoke)

Length with cap: 162mm

Diameter: 47mm

Country of origin: russia









RDG-55Ch (black smoke)

Diameter: 50mm Length: 220mm

Country of origin: Ukraine





JVA 0406 (grey smoke)

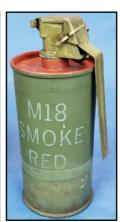
Diameter: 53mm
Total height: 127mm
Height of body: ~107mm
Country of origin: Finland











M18

(colored smoke)

Diameter: 64mm
Height of body: 125mm
Total height: 146mm
Note: Produces yellow,
green, violet, or red smoke.
Country of origin: USA









M83 TA (white smoke) Diameter: 64mm Height of body: 125mm Total height: 146mm Country of origin: USA









MIL-X (colored smoke)

Diameter: 60mm Height of body:

INFORMATION NEEDED

Total height: 160mm Note: There are at least 9 variants of this model, which produce 9 different colors. Country of origin: USA







GR MA FUM 56 (white smoke)

Diameter: 55mm Height of body:

INFORMATION NEEDED

Total height: ~160mm Note: These grenades can be connected together for longer production of smoke. Country of origin: France







MK 17 MOD 0 (green smoke)

Diameter: INFORMATION NEEDED
Height of body: INFORMATION NEEDED
Total height: INFORMATION NEEDED

Country of origin: USA







Rökhandgranat 05 (smoke / red phosphorus)

Diameter: INFORMATION NEEDED
Height of body: INFORMATION NEEDED
Total height: INFORMATION NEEDED

Country of origin: Sweden













DM45 (smoke)

Diameter: 74mm
Height of body: 115mm
Total height: 150mm

Country of origin: Germany



Miscellaneous Grenades

Miscellaneous grenades include those that produce light and noise (flashbangs), start fires through incendiary effects, etc.

Miscellaneous Grenades











Length: 220mm Diameter: 61mm

Note: This grenade can be set for much longer time delay durations and used as a sabotage device. Additional bodies can be connected for a greater

incendiary effect.

Country of origin: USSR









AN-M14 (incendiary)

Diameter: 63.5mm Height of body: 114mm Total height: 145mm Country of origin: USA























Diameter: 55mm Height of body: 135mm

Total height:

INFORMATION NEEDED

Country of origin: russia

Miscellaneous Grenades



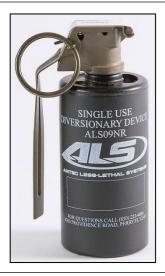


Zarya-3 (flashbang)

Diameter: 64mm Height: 120mm

Country of origin: USSR/russia









ALS09NR (flashbang)

Diameter: 44mm

Height of body: **INFORMATION**

NEEDED

Height with M201A1 fuze: 114mm

Country of origin: USA







Teren-7M (flashbang)

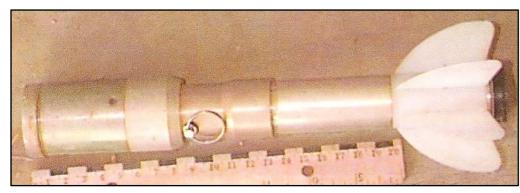
Diameter: 49mm Length of body: 80mm Total length: 135mm Country of origin: Ukraine



Rifle Grenades

These are grenades specifically designed or adapted to be fired/launched from the muzzle of a rifle.

Rifle Grenades



<u>M94</u> (HEAT)

Diameter: 40mm Length: 265mm Tailspan: 82mm Country of origin: Former Yugoslavia







M60 (HE-frag)

Diameter: 30mm Length: 307mm Country of origin: Former Yugoslavia





PGN-60 (HEAT)

Diameter: 68mm Length: 406mm Country of origin:

Poland





GNPO

(HEAT, fragmentation)

Diameter: 40mm Length: 279mm Tailspan: 60mm Country of origin:

Poland



Rifle Grenades



KGN (HE-frag)

Diameter: 60mm Length: 240mm

Country of origin: Poland





GR FL AC 58 PAB (HEAT)

Diameter: 58mm Length: 390mm

Country of origin: France



Antipersonnel mines are designed to destroy or wound enemy personnel.







PMD-6/7 (HE)

Dimensions: varies
Note: These are handmade
versions based on the old Soviet
models. Bodies may be made of
wood, plastic, or metal.
Country of origin: russia









PMN (HE)



Diameter: 110mm Height: 53mm Country of origin: USSR







PMN-2 (HE)



Height: 52 mm Country of origin: USSR











PMN-4 (HE) Diameter: 95mm Height: 42mm Country of origin: russia











M18A1 Claymore

(directional fragmentation)

Length: 216mm Height of body: 83mm Total height: 171mm Thickness: 35mm Country of origin: USA







MON-50 (directional fragmentation)

Length: 226мм Height: 155мм Width: 35мм

Country of origin: USSR









MON-90 (directional fragmentation)

Length: 345mm Height: 202mm Width: 153mm

Country of origin: USSR











MON-100 (directional fragmentation)

Diameter: 236mm Width: 82mm

Country of origin: USSR







MON-200 (directional fragmentation)

Diameter: 434мм Height:130мм Country of origin: USSR







POB "Saw" (bounding, fragmentation)

Height: 170mm Diameter: 90mm

Country of origin: russia





POM-2R Series (fragmentation)

Diameter: 68.5mm Height: 165mm

Note: These are the handemplaced versions of the

POM-2 mines.

Country of origin: russia







POM-2R BS (fragmentation)

Diameter: 68.5mm Height: 165mm

Note: This is a variant of the POM-2R that does not have a self-destruct feature. Country of origin: russia









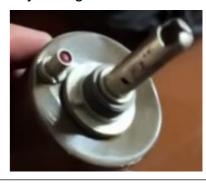


MIB "Insert" (fragmentation)

Diameter: 61.5mm

Height with ZMG-1 fuze: 170mm Note: This is a version of the POM-2 Series that the user can select to act either as a hand-emplaced POM-2 or as a throwable grenade.

Country of origin: russia













MOB

(directional fragmentation)

Length: INFORMATION NEEDED Height: INFORMATION NEEDED Width: INFORMATION NEEDED

Country of origin: russia





Mini Hailstorm (directional fragmentation)

Length: 106mm Height: 83mm

Width: INFORMATION NEEDED

Country of origin: Finland









PVP-50 (directional fragmentation)

Length of body: 223mm Height of body: 105mm Thickness of body: 47mm Country of origin: Ukraine





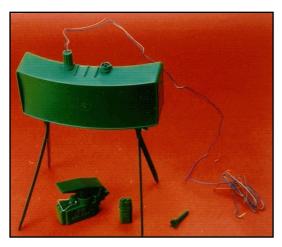


PVP-200

(directional fragmentation) Diameter of body: 400mm Thickness of body: 100mm

Country of origin: Ukraine







MRUD

(directional fragmentation)

Length: 230mm Height of body: 100mm

Width: 50mm

Country of origin: Former

Yugoslavia









OZM-72 (bounding, fragmentation) Diameter: 106mm Height of body: 150mm

Country of origin: USSR



Anti-tank mines are designed to destroy enemy armored vehicles, lightly armored vehicles and unarmored vehicles.







TM-46 and TMN-46 (HE)

Diameter: 304.8mm Height without fuze: 94mm Note: TMN-46 is distinguished by the presence at the bottom of the mine of a special cavity for installing a fuze, which performs the function of an anti-lifting device.

Country of origin: USSR





TM-57 (HE)

Diameter: 312mm
Height without fuze: 119mm
Note: Has a side fuze well for the installation of an additional fuze.

Country of origin:

USSR







TM-62M (HE)

Diameter: 320mm Height: 102mm

Country of origin: USSR







TM-62D (HE)

Width: 340mm Length: 295mm

Height with fuze: 178mm Note: Uses the MVP-62 and

MVCh-62 Fuzes.

Country of origin:

USSR







TM-62P2 (HE)

Diameter: 320mm

Height with fuze: 128mm Note: Uses the MVP-62 and

MVCh-62 Fuzes.

Country of origin: USSR







TM-62P3 (HE)

Diameter: 320mm

Height with fuze: 128mm Note: Uses the MVP-62 and

MVCh-62 Fuzes.

Country of origin: USSR







<u>TM-72</u> (EFP)

Diameter: 250mm Height without fuze:82mm

Height with MVN-72 fuze: 128mm Note: May be used with the MVN-72 or

MVN-80 magnetic-influence fuzes.

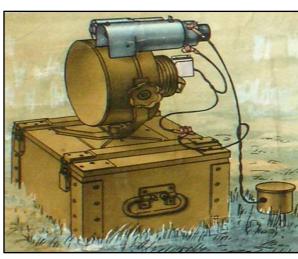
Country of origin: russia











TM-83 (EFP)

Length: 455mm Width: 377mm

Height when installed on the

lid of the box: 440mm Country of origin: russia











TM-124 (HE)

Diameter: 320mm Height: 125mm

Note: This mine uses two internal fuzes.

Country of origin: Ukraine









Diameter: 350mm Height of body: 260mm Height of tilt rod: 650mm





Note: The tilt rod fuze is placed close to the mine body and connected by a length of detonating cord.

Country of origin: Romania





M-14/PK-14 (EFP)

Depth of the warhead: 110mm Diameter of the warhead: 160mm

Country of origin: Estonia



PTKM-1R (EFP)

Height of the mine: 510mm
Diameter of the mine: 181mm
Diameter of the warhead section: 220mm

Note: This mine uses a combination of acoustic and seismic sensors to activate. Country of origin: russia





















HPD2A2 (EFP)

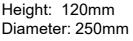
Width: 105мм Length: 280мм Height: 185mm

Country of origin: France





DM31 (EFP)



Country of origin: Germany















PARM 2 / DM22 (HEAT)

Diameter: 128mm Length: 640mm Height: 391mm

Diameter of the Warhead: 132mm

Country of origin: Germany















Stridsvagnsmina m/52B (HE)

Diameter: 345mm

Height without fuze: 72mm Height with m/47 fuze: 152mm Country of origin: Sweden





<u>C-3-B</u> (HE)

Diameter: 290mm Height of body: 60mm Height with fuze: 115mm Country of origin: Spain









<u>DM11</u> (HE)

Diameter: 300mm Height: 95mm

Note: Uses the DM46 fuze. Country of origin: Germany







Pansermine M/56 (HE)

Diameter: 300mm Height: 110mm

Note: Uses the M/66 fuze. Country of origin: Denmark









Diameter: 320mm Height of body: 80mm

Height with P-62 fuze: 135mm Country of origin: Romania







PT-Mi-Ba-III (HE)

Diameter: 330mm Height: 108mm

Country of origin: Czech







MI AC AH F1 (EFP)

Diameter: 200mm Length: 260mm Height: 350mm Country of origin:

France





KRM-T / PTM-4R (HEAT)

Length: 390mm Width: 118mm Height: 69mm

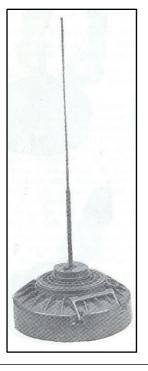
Note: This is the hand-emplaced version of the

PTM-4 mine.

Country of origin: russia







TMRP-6 (EFP)

Diameter: 290mm

Height without tilt rod: 137mm Height with tilt rod: 726mm Country of origin: Serbia









<u>M21</u> (EFP)

Diameter: 230mm Height of body: 115mm Height With tilt rod: 813mm Country of origin: USA









UMK (EFP)

Diameter: 262mm Height without tilt rod:

226mm

Height with tilt rod: 1010mm Country of origin: Poland





PT-Mi-U (EFP)

Diameter: 320mm

Height without tilt rod: 128mm Height with tilt rod: ~600mm Country of origin: Czech









M6A2 (HE)

Diameter: 333mm Height of body: 86mm Note: Uses the M603

fuze.

Country of origin: USA







M15 (HE)

Diameter: 337mm Height of body: 125mm Note: Uses the M603

fuze.

Country of origin: USA





MKTBT (HE)

Diameter: 337mm Height: 105mm

Note: Uses a copy of the MV-5 fuze.

Country of origin: Albania





MAT-62B

(HE)

Diameter: 340mm

Height with P-62 fuze: 134mm Country of origin: Romania







ATM-01 (HE)

Diameter: 300mm Height of body: 92mm

Height with ATM-01TAC fuze: 126mm

Country of origin: Bulgaria







<u>TMA-3</u> (HE)

Diameter: 265mm Height of body: 80mm

Height with UTMAH-3 fuze: 140mm Country of origin: Former Yugoslavia







Diameter: 285mm Height of body: 65mm

Height with UTMAH-4 fuze: 110mm Country of origin: Former Yugoslavia









MPT-23P2 (HE)

Diameter: 320mm
Height without fuze: 90mm
Note: Uses the same fuzes as
TM-62 Series landmines.
Country of origin: Ukraine













<u>L9A2 / L18A1 Barmine</u> (HE)

Length: 1200mm Width: 108mm Height: 81mm Note: Uses the integral L89A1 pressure

fuze.

Country of origin: UK



Boobytrap Devices

Boobytrap devices are designed to kill or wound a victim in a surprising way; they contain a small amount of explosives that may also set of a larger explosive charge.

Boobytrap Devices





ML-7 (pressure-release)

Length: 72mm Width: 69mm Height: 30mm

Country of origin: USSR





ML-8 (pressure-release)

Length: 112mm Width: 58mm Height: 38mm

Country of origin: USSR











MS-3 (pressure-release)

Height: 65mm Diameter: 110mm Country of origin: USSR



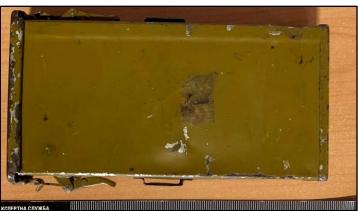






Boobytrap Devices





MS-4

(time delay, anti-disturbance)

Height: 31mm Width: 92mm Length: 155mm

Country of origin: russia









MZU-2 "Willow" (multifunction)

Length: 193mm Width: 116mm Thickness: 32mm



Note: May be used with the VZD-144ch fuze.

Country of origin: russia

Sea/River Mines

Sea and river mines are placed in the water to damage submarines, surface ships and enemy ships, as well as to complicate their movement.

Anti-landing Mines



<u>YaRM</u> (HE) Diameter: 275mm



Height Without Fuze: 510mm Height With Fuze: 900mm Country of origin: russia/Ukraine







PDM-1M (HE-frag)

Diameter: 800mm

Height Without Fuze: **INFORMATION NEEDED**

Height With Fuze: 1m

Country of origin: russia/Ukraine



Anti-landing Mines

PDM-3Ya (HE)

Diameter of body: 500mm



Height with fuzes: 730mm Width with fuzes: 650mm Length with fuzes: 900mm Country of origin: russia







PDM-4 / KPDM-4 (HE) Diameter of Mines: 137mm

Diameter of Cassette: 140mm



Height of Mine: 447mm Height of Cassette: 480mm Country of origin: russia





Special Mines

Specia	l mines	are used	for sabo	otage or	other un	usual pı	urposes.

Limpet Mines





SPM (HE)

Height: 75mm Width: 115mm

Length without fuze: 280mm Length with fuze: INFORMATION

NEEDED

Note: Uses the VZD-1M fuze. Country of origin: russia/Ukraine







MPM (HE)

Height: 50mm Width: 75mm

Length without fuze: 150mm
Length with fuze: INFORMATION

NEEDED

Note: Uses the VZD-3M fuze. Country of origin: USSR











Height: 170mm Width: 230mm

Length without fuze: 530mm Length with fuze: INFORMATION

NEEDED

Note: Uses the VZD-1M or VZD-20M fuzes. This mine also has an integral anti-removal mechanism!

Country of origin: USSR



Limpet Mines



BPM (HE)

Diameter of body: 225mm

Height: 100mm

Note: Uses the VZD-1M fuze. This

mine also has an integral anti-

removal mechanism! Country of origin: russia



Signal Mines

Signal mines are used to alert the presence of enemy forces. Although they are no specifically designed to wound or kill, they are pyrotechnic devices that can still cause burn injuries.

Signal Mines





M49A1 (illumination)

Diameter: 38mm Height: 119mm

Note: Tripwire with pull or tension-release action.

Country of origin: USA







SM (signal)

Diameter: 25mm Length: 278mm

Note: Used with the MUV-series fuzes. White, green and red-colored models are available. Country of origin: russia, Ukraine



MSK-40 (signal/illumination)

Diameter: 40mm

Length of body: 350mm

Note: Used with the MUV-series fuzes. As well as emitting a loud noise, each

mine fires a combination of colored signal and illumination stars.

Country of origin: russia





Mortar (Projectiles)

Mortar projectiles are designed to destroy and suppress enemy personnel and vehicles.





60mm O-LM60

(HE)

Length: INFORMATION

NEEDED

Note: Uses the ZGM fuze.

Country of origin:

Poland





60mm J-M49A2

(HE-frag)

Length with fuze: 244mm Note: Uses the US M525-series

Fuzes.

Country of origin: USA/Japan





60mm HE60 MA

(HE-Frag)

Length with AF621 Fuze: 314mm Length without fuze: 254mm Country of origin: Bulgaria









60mm HE60

(HE-Frag)

Length with O-4M or O-4N Fuze: 310mm

Length without fuze:

INFORMATION NEEDED

Country of origin: Bulgaria





60mm Iranian Mortar (HE)

Length with AZ111-A2 fuze:

265mm

Country of origin: Iran



60mm UB60 (fragmentation)

Length with M68P1 fuze: 285mm

Country of origin: Ukraine







60mm M768A1 (HE)

Length with M783 fuze: 376.9mm

Country of origin: USA





OD NATA HE TATE N LOLUSTIG



60mm M73

(HE)

Length with UT M68P1 fuze: 286mm

Country of origin: Serbia







60mm "1963年式" Type 1963 (fragmentation)

Length with 迫-1甲 fuze:~237mm Length without fuze: ~200mm Country of origin: China





60mm North Korean Mortar (model unknown) (fragmentation)

Length with fuze:

INFORMATION NEEDEDLength without fuze:

INFORMATION NEEDED

Country of origin: North Korea





60mm HE (HE-Frag)

Length with M6 fuze: 310mm

Length without fuze: 255mm Country

of origin: Bulgaria







60mm GE M/972 (HE-frag)

Length without fuze: **INFORMATION NEEDED**

Length with DM 111 A2 fuze: INFORMATION NEEDED

Country of origin: Portugal









60mm M888 (HE-frag)

Length with M935 fuze: 374mm Length without fuze: 311mm Country of origin: USA



81mm M889A2 (HE-frag) Length with M783 Fuze: **INFORMATION NEEDED** Length without fuze: **INFORMATION NEEDED**







81mm HE 81LDMA (HE-frag)

Length without fuze: **INFORMATION NEEDED** Country of origin: Bulgaria



81mm M/49 (fragmentation)

Length without fuze: 346mm Length with M/49/62 fuze: **INFORMATION NEEDED** Country of origin: Denmark





81mm M879A1 (practice)

Length with M751 fuze: 498mm Length without fuze:

INFORMATION NEEDED

Note: These mortars contain a pyrotechnic spotting charge. Country of origin: USA





82mm O-832 (fragmentation)

Length without fuze: 277mm Note: Used with several different

fuzes.

Country of origin: USSR





82mm O-832DU (fragmentation)

Length without fuze:

278mm

Note: Used with several

different fuzes.

Country of origin: russia





82mm O-832-DU (fragmentation)

Length without fuze: 278mm

Country of origin: **INFORMATION NEEDED**







82mm O-832-77 (fragmentation) Length without fuze: 304.8mm

Country of origin: Romania





82mm HE 82 (HE-Frag)

Length with fuze: 332.6mm Note: Uses the O-4M and O-4N

fuzes.

Country of origin: Bulgaria





82mm HE 82 M (HE-Frag)

Length with fuze: AF611: 345mm AF67: 355mm

Country of origin: Bulgaria





82-мм Ukrainian-produced <u>Mortar</u> (HE-frag)

Length without fuze:

INFORMATION NEEDED

Note: Used with several different

fuzes.

Country of origin: Ukraine



82mm 3VO35E (fragmentation)

Length with fuze: **INFORMATION**

NEEDED

Country of origin:

russia





82mm S-832S (illumination)

Length without fuze: 293mm Length with T-1 fuze: 353mm Country of origin: russia



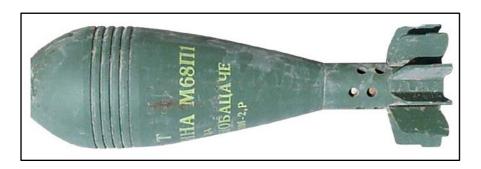




82mm D-832DU (smoke / white phosphorus)

Length without fuze: 276mm Country of origin: russia





82mm M68P1

(HE-frag)

Length with UT M68P1 fuze: 340mm

Length without fuze: 295mm Country of origin: Former

Yugoslavia







82mm M74P1

(HE-frag)

Length without fuze: **INFORMATION NEEDED**

Length with UT M68P1 fuze:

394mm

Country of origin: Former

Yugoslavia





82mm M67 (illumination)

Length without fuze: 344mm Length with M67 fuze: 410mm Country of origin: Serbia





82mm O-832-MC (HE-frag)

Length without fuze:

INFORMATION NEEDED

Length with fuze: 660mm Country of origin: Romania





120mm D-5 (smoke / white phosphorus)

Length without fuze: 603mm Country of origin: USSR





120mm OF5 (HE-frag)

Length without fuze:

INFORMATION NEEDED

Length with AR-27 fuze: 680mm

Country of origin: USSR





120mm S-843 (illumination)

Length without fuze: 665mm Length with T-1 fuze:

735.6mm

Country of origin: USSR







120mm 3S9

(illumination)

Length without fuze: 663mm Length with T-1 fuze:

733.6mm

Country of origin: USSR









120mm OF-NMR (rocket-assisted HE-frag)

Length without fuze: INFORMATION NEEDED

Length with M-12 fuze: 800mm Country of origin: Poland



120mm HE120 (fragmentation)

Length without fuze: 602.5mm Length with AF69 fuze: 674mm Country of origin: Bulgaria



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120mm OF-843B

(HE-frag)

Length without fuze: 603mm Length with M-12 fuze: 674mm Country of origin: USSR

120mm HE-843B (HE-frag)

Length without fuze: 600mm Length with M-12 Fuze: 674mm Country of origin: Sudan, Bulgaria











120mm OF34 (HE-frag)

Length with M-12 Fuze: 733.5mm

Country of origin: russia



120mm OF36 (HE-frag)

Length with M-12 Fuze: 733.5mm Country of origin: russia



120mm M/50 (fragmentation)

Length without fuze: 555mm Length with M/49/62 fuze: 618mm Country of origin: Denmark





120mm M933A1

(HE-frag)

Length without fuze: 643mm Note: Uses the M783 fuze. Country of origin: USA





120mm M1101 (HE-frag)

Length without fuze: **INFORMATION NEEDED**

Length with M767A1 fuze: 570mm

Note: This mortar has a pre-scored rotating band.

Country of origin: USA





120mm M48 (HE-frag)

Length with AZ111-A2 Fuze:

580mm

Country of origin: Iran



120mm 3-Z-2 (incendiary)

Length without fuze:

INFORMATION NEEDED

Length with T-1 fuze: 716.6mm

Country of origin: USSR









120mm M44A2

(fragmentation)

Length with V19PA2 Fuze: 676mm

Country of origin: Pakistan





120mm JVA 1571

(HE-frag)

Length without fuze: **INFORMATION NEEDED**

Length with JVA 7575 fuze: 702mm

Country of origin: Finland







120mm M62P10

(HE-frag)

Length with UT M68P1 fuze:

593mm

Country of origin:

Serbia







120mm M530A1

(HE-frag)

Length with M8100 fuze:

770mm

Country of origin: Belgium







120mm M971 (HEAT submunitions)

Length without fuze: 767mm Length with fuze: 827mm

Tailspan: 270mm

Country of origin: Israel









120mm NT120 (HE-frag)

Length with AU-29P1 fuze: 808mm

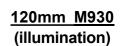


Note: May use either the M8100 or AU-29P1

fuze.

Country of origin: Spain





Length with M776 Fuze:

703mm

Country of origin: USA





140mm North Korean Mortar (model unknown) (HE-frag)

Length with fuze: **INFORMATION NEEDED**Length without fuze: **INFORMATION NEEDED**

Country of origin: North Korea







240mm F-864 (HE-frag)

Length with fuze: 1560mm Country of origin: russia



240mm 3VF2/3F2

(HE)

Unfired length: 2678mm Fired length: 2348mm

Note: Uses the 3F3 HE warhead.

Country of origin: russia



240mm 3F5 "Daredevil"

(HE)

Length with fuze: 1635mm

Length without fuze: **INFORMATION**

NEEDED

Country of origin: russia











Unfired length: INFORMATION

NEEDED

Fired length: **INFORMATION NEEDED**

Note: Uses the 3O9 warhead. Country of origin: russia







<u>O-10 / 3-O-10</u>

Small Arms Ammunition

Within this guide, small arms ammunition is defined as cartridges with projectiles of 20mm caliber and below in size. Note that different countries may use other rules for which sizes fall within this category,

There are hundreds, possibly thousands of different small arms ammunition currently found in Ukraine - only those models that contain high explosives and/or fuzes are included in this guide. This is due to the increased hazards that they have compared to normal small arms ammunition.

Small Arms Ammunition, 12.7-14.5mm



12.7mm MDZ (HE-incendiary) Length of bullet: 66mm Cartridge length: 108mm Country of origin:





14.5mm MDZ-M (HE-incendiary) Length of bullet: 70.65mm

Cartridge length: 155mm

Country of origin:

USSR

Small Arms Ammunition, 20mm



20mm M57 TZO (HEI-T)

Projectile length: 92mm Total length: 184mm

Country of origin: Former Yugoslavia













20mm M57 TZ (HEI)

Projectile length: 92mm Total length: 184mm Country of origin: Former Yugoslavia, Serbia











20mm HIS AP-T

(AP-T)

Projectile length: **INFORMATION**

NEEDED

Total length: 184mm Country of origin: Serbia





20mm M60 PZ

(API)

Projectile length: 81mm Total length: 183mm

Note: May be labeled as "Π3" or

"ПАНЦ. ЗАП.".

Country of origin: Former Yugoslavia







Small Arms Ammunition, 20mm







20mm DM63 (HVAPDS-T)

Projectile length: **INFORMATION**

NEEDED

Total length: 213mm

Country of origin: Germany

Projectiles

Projectiles serve to destroy the enemy's manpower, suppress tanks and other targets, destroy defensive structures, and perform other important artillery tasks.

Projectiles, 23mm



23mm BZ (API) and BZT (API-T)

Projectile length: 108.2mm Cartridge length: 234.95mm Country of origin: USSR







23mm OFZ (HEI)

Projectile length: 109mm Cartridge length: 204mm Country of origin: USSR







23mm OFZT (HEI-T)

Projectile length: 109mm Cartridge length: 236mm Country of origin: USSR



23mm Cartridge for the R-23 "Rikhter" Gun (HE-frag-incendiary)

Projectile length: 109mm Cartridge length: 260mm Cartridge Diameter: 27mm Country of origin: russia





Projectiles, 25mm







25mm M792 (HEI-T)

Projectile length: 117mm Cartridge length: 219mm Country of origin: USA









25mm M791 (APDS-T)

Projectile length: 86mm Cartridge length: 223mm Country of origin: USA







30mm VOG-17M (fragmentation, projected grenade)

Projectile length: 113mm Total length: 131.8mm Country of origin: USSR







30mm VOG-30D (7P36D) (fragmentation, projected grenade)

Projectile length: 113mm Total length: 132mm Country of origin: Russia





30mm RHV-HEF

(HE-frag, projected grenade)

Projectile length: **INFORMATION**

NEEDED

Total length: 133mm Note: Uses the AF35 Fuze. Country of origin: Bulgaria







30mm RHV-TP

(practice, projected grenade)

Projectile length: INFORMATION

NEEDED

Total length: 133mm

Note: The fuze and projectile are inert.

Country of origin: Bulgaria







30mm VUS-17 (red smoke)

Projectile length: 112mm
Total length: INFORMATION

NEEDED

Note: Uses the VMG-M fuze Country of origin: russia







30mm M93 P1

(HE-frag, projected grenade)

Projectile length: **INFORMATION**

NEEDED

Total length: 132mm Country of origin: Serbia







30mm BZT (API-T)

Projectile length: ~144mm Cartridge length: 266mm

Country of origin:

USSR

Projectiles, 35mm





35mm DM31 (HEI-T)

Projectile length: 228mm Total length: 387mm Country of origin: Germany







Projectiles, 37mm



37mm BZT (API-T)

Projectile length: 155.7mm Cartridge length: 384mm Country of origin: USSR









37mm OR-167 and OR-167N (fragmentation with tracer)

Projectile length: 173.99mm
Cartridge length: 382mm
Country of origin: USSR



40mm VOG-25 (fragmentation, projected grenade)

Length: 120.37mm Country of origin: USSR/Bulgaria





40mm VOG-25P (bounding fragmentation, projected grenade)

Length: 120mm

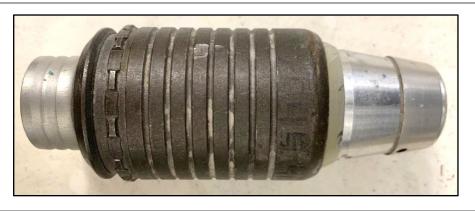
Note: Uses the VMG-P fuze.

Country of origin: USSR/Bulgaria









40mm VOG-25PM (7P45) (bounding fragmentation, projected grenade)

Length: 107mm Country of origin: russia







40mm VOG-25M (fragmentation, projected grenade)

Length: 107mm

Country of origin: Russia





40mm VUS-25 (7P44U)

(red smoke)

Length: 107mm

Note: Uses the VMG-M fuze. Country of origin: Russia





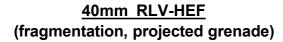
40mm RLV-HEFJ

(bounding fragmentation, projected grenade)

Length: 105.8mm

Note: Uses the AF43 fuze. Country of origin: Bulgaria





Length: 102.6mm

Note: uses the AF41 fuze.

Country of origin: Bulgaria







40mm M430 and M430A1

(HEAT, fragmentation)

Length with fuze: 79.8mm

Length with fuze and Cartridge: 112.1мм

Note: Used with M549 and M549A1 fuzes

Country of origin: USA



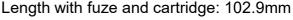




40mm M433 (HEAT, fragmentation)

Length with fuze: 82mm





Note: Used with M550 fuze. Country of origin: USA







40mm DM121 (HE-frag)

Length: 53mm

Length with fuze and cartridge: 112mm

Note: Uses AZ-Z DM451 fuze.

Country of origin:

Germany







40mm M6P (HE-frag)

Length: INFORMATION NEEDED

Length with fuze and cartridge: 98.9mm

Note: Used with PSK-7A fuze.

Country of origin: Bosnia and

Herzegovina







40mm GLV-HEF-1 / RLV-HEF-1 (HE-frag)

Length: 46mm

Length with fuze and cartridge:

102.5mm

Note: Uses A411 fuze. Country of origin: Bulgaria







40mm M713 (red smoke)

Length or projectile: 81mm Length with cartridge: 99.3mm

Country of origin: USA









40mm M715
(green smoke)
Length or projectile:
81mm
Length with cartridge:
99.3mm
Country of origin:
USA





40mm DM42 (HEAT, fragmentation)

Length: 53mm

Length with fuze and cartridge: 112mm

Note: Uses AZ-Z DM451 fuze.

Country of origin:

Germany





40mm HE 01 (HE-frag)

Length of projectile: **INFORMATION**

NEEDED

Length with cartridge: 106mm Note: Uses the URJ-004 fuze.

Country of origin:

Croatia







40mm HEDP14 (HEAT, fragmentation)

Length of projectile: **INFORMATION**

NEEDED

Length with cartridge: **INFORMATION**

NEEDED

Note: Uses the DM941 fuze. Country of origin: Germany









40mm AR383 (HE-frag)

Length with fuze: 53mm

Length with fuze and cartridge: 112mm Note: There are two variants; one has a metal nose cap and the other has a plastic

nose cap.

Country of origin: Bulgaria









40mm HE ABM (HE-frag)

Length of projectile: **INFORMATION NEEDED**

Length with cartridge: 112mm. Country of origin: Germany







40mm M1001 (flechette)

Unfired length: 111.5mm Country of origin: USA











40mm VG-40TB (thermobaric)

Length: 122.5mm Country of origin: russia









40mm VG-40MD (smoke / incendiary)

Length without fuze: 94mm Length with VMG-K fuze: 121mm Country of origin: russia









40mm DM81A2 (HEI)

Fired length: **INFORMATION**

Length with cartridge: 534mm Note: Uses the DM321 fuze. Country of origin: Germany

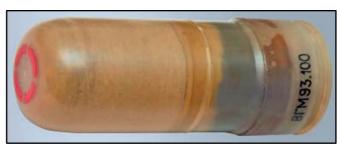






Projectiles, 43mm





43mm VGM93.100 (thermobaric) Length: 120mm Country of origin: russia



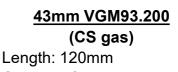




















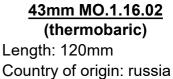
43mm VGM93.900 (fragmentation) Length: 120mm Country of origin: russia



Projectiles, 43mm











57mm OR-281 (fragmentation with tracer)

Length with fuze: 259.21mm Length without fuze: 210.7mm Country of origin: USSR





57mm OR-281U (fragmentation with tracer)

Length with fuze: 261.37mm Length without fuze: 214.63mm Country of origin: USSR

Projectiles, 73mm

73mm OG-9, OG-9M, OG-15B, and OG-15VB (fragmentation)

Length with GO-2 fuze: 724.54mm Length without fuze: 649.10mm

Country of origin: USSR, Bulgaria







73mm Romanian OG-9 (fragmentation)

Length without fuze: 385mm Country of origin: Romania

73mm HEAT PG-9, PG-9S, and PG-15

(rocket-assisted, HEAT)

Length of PG-9: 787.4mm Length of PG-9S: 773.44mm Country of origin: USSR, Bulgaria









Projectiles, 76-82mm



76mm BZR-350B

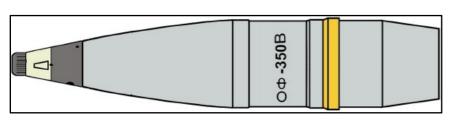
(API-HE-T)

Length with fuze: 303.76mm
Length without fuze: 276.43mm

Note: Uses the MD-5 fuze. Country of origin: USSR







76mm OF-350V (HE-frag)

Length with fuze: 366mm Length without fuze: 307mm

Note: Uses KTM-1, RGM-2, V-429

fuzes.

Country of origin:

USSR



Length with fuze: 545mm Length without fuze: 466mm Country of origin: USSR



82mm BK-881 and BK-881M (HEAT)



Length with fuze: 683.51mm Length without fuze: 608.83mm Country of origin: USSR





85mm BR-365P (HVAP-T)

Length: 256.46mm Country of origin: USSR



85mm PBR-367 (AP-T Practice)

Length: 266.7mm

Note: Training version of the BR-367.

Country of origin: USSR



85mm BR-365 (APHE-T)

Length with fuze: 291.27mm Length without fuze: 266.12mm

Note: Uses the MD-8 fuze. Country of origin: USSR





100mm OF32 (HE-frag)

Length with fuze: 430mm Length with cartridge: 530mm Note: Uses the V-429 fuze. Country of origin: USSR







100mm BK16M (HEAT)

Length of Projectile with Fuze: 581mm

Length of Projectile and fuze with

Cartridge: 1090mm Country of origin: russia





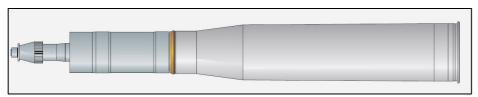
100mm OF35 (HE-frag)

Length with cartridge: 1284mm Country of origin: Ukraine, russia





100mm BK17M (HEAT)



Length of projectile:

INFORMATION NEEDED

Unfired length: 1093mm Note: uses the V-15 fuze.

Country of origin:

russia

105mm M927 (rocket-assisted, HE-frag)

Length of projectile: 539mm

Length of projectile with cartridge: 821mm

Note: Uses the M739A1 Fuze.

Country of origin: USA







105mm M1 (HE-frag)

Length of projectile: 404mm

Length of projectile with cartridge: 725mm

Note: Uses the M739A1 fuze.

Country of origin: USA







105mm M760 (HE-frag)

Length of projectile: 399mm

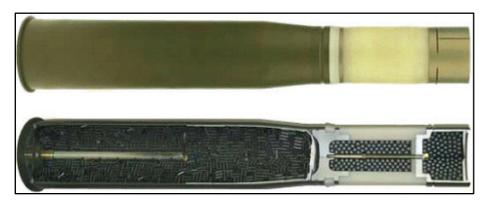
Length of projectile with cartridge: 726mm

Note: Uses the M739A1 fuze. Country of origin: USA









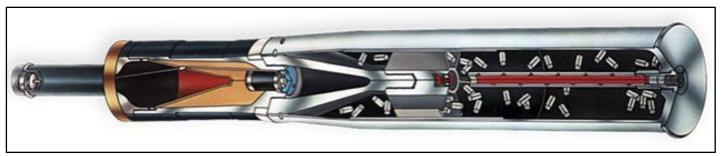
105mm M1040 (shrapnel)

Length with cartridge: 873mm Country of origin: USA



105mm M456A2 (HEAT)

Length of projectile: 662mm
Length with cartridge: 1000mm
Country of origin:
USA





105mm M67 (HEAT)

Fired length: 509mm

Length with cartridge: 789mm Note: Uses the M91 fuze. Country of origin: USA







105mm HE R-105-60 (HE-frag)

Length of projectile: 443.5mm Length with cartridge: 990mm Note: Uses the KZ-984 or

M739A1 fuzes.

Country of origin: Slovakia





105mm PECA T C512 (APFSDS)

Length of projectile: 647mm Length with cartridge: 996mm Country of origin: Slovakia



105mm OFL F3 (APFSDS)

Length of projectile:

INFORMATION NEEDED

Length with cartridge: 884mm Country of origin: France



105mm OCC F3B (HEAT)

Length of projectile: INFORMATION NEEDED

Length with cartridge: 842mm

Country of origin: France





105mm M393A3 (HEP/HESH)

Length of projectile: 490mm Length with cartridge: 940mm

Country of origin: USA









115mm Projectile (APFSDS-T)

Length: 515mm

Note: Contains a tracer

element.

Country of origin: USSR



115mm BK-4M (HEAT)

Length without fuze: 542mm Length with fuze: 634mm Length with fuze and cartridge:

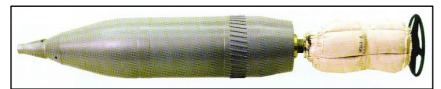
1052mm

Country of origin: USSR









120mm 3OF49 (HE-frag)

Length of projectile: 545mm Length with fuze: 620mm Unfired length: 828mm

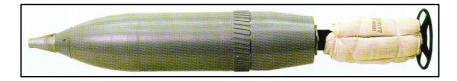
Note: Uses the 3V35 fuze. This projectile has a pre-scored

rotating band.

Country of origin: USSR







120mm 3OF50 (rocket-assisted HE-frag)

Length of projectile: 550mm Length with fuze: 625mm Unfired length: 835mm Note: Uses the 3V35 fuze. This

projectile has a pre-scored

rotating band.

Country of origin: USSR





120mm 3BK19 (HEAT)

Length of projectile: 665mm Unfired length: 960mm Note: This projectile has a pre-scored rotating band.

Country of origin:

USSR







120mm DM11 (HE-frag)

Length of projectile: 570mm

Length with cartridge:

INFORMATION NEEDED

Country of origin: Germany





120mm DM33A1 (APFSDS)

Length of projectile: ~640mm Length with cartridge: 978mm Country of origin: Germany



120mm DM53/DM53A1 (APFSDS)

Length of projectile: 745mm

Length with cartridge:

INFORMATION NEEDED
Country of origin: Germany



(APFSDS)

Length of projectile: 745mm Length with cartridge:

INFORMATION NEEDED

Country of origin: Germany



120mm IM HE-T

(HE)

Length of projectile:

INFORMATION NEEDED

Length with cartridge: 943mm

Country of origin:

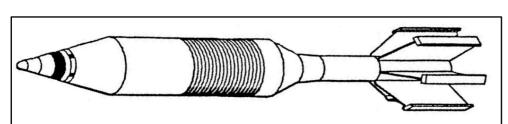
Germany





120mm M1028 (shrapnel)

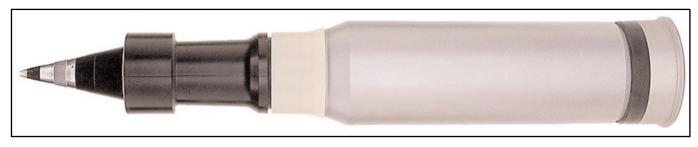
Length of projectile: 317.5mm Length with cartridge: 780mm Country of origin: USA



120mm M830A1 (HEAT)

Length of projectile: 772mm Length with cartridge: 984mm Country of origin: USA







122mm Sh1 (flechette)

Length of projectile: 455mm Note: Uses the DTM-75 fuze. Country of origin: USSR





122mm S4Zh (illumination)

Length of projectile: 470mm Note: Uses the T-7 fuze.

Note: Uses the T-7 fuze. Country of origin: USSR







122mm D4 (smoke / white phosphorus)

Length of projectile: 500mm Note: Uses the RGM-2 fuze. Country of origin: USSR









122mm OF56 and OF56-1 (HE-frag)

Length of projectile: 501mm Note: Uses the RGM-2 fuze. Country of origin: USSR





122mm OF24Zh (HE-frag)

Length of projectile: 500mm Country of origin: russia



122mm BK13 (HEAT)

Length of projectile: 637mm Note: Uses the V-15 fuze. Country of origin: russia











122mm A1 (A1Zh and A1ZhD) (propaganda)

Length of projectile: 420mm Note: Uses the T-7 fuze.

Country of origin: russia/Ukraine





122mm Kitolov-2M (HE-frag)

Length of projectile: 1190mm Country of origin: russia





122mm OF56IM-1P (HE-frag)

Length of projectile: INFORMATION NEEDED

Note: Uses the RGM-2

fuze.

Country of origin: russia







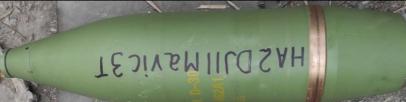
122mm 462A1 (HE-frag)

Length of projectile: 507mm Length with UTIU M72B1 fuze:

565mm

Country of origin: Serbia









122mm P1A1 (HE-frag)

Length of projectile:

INFORMATION NEEDED

Note: Uses the LIU-4 fuze.

Country of origin:

Pakistan





125mm BM15 (BM18 Cartridge) (APFSDS)

Unfired length: **INFORMATION**

NEEDED

Fired length: 547mm Country of origin: russia



125mm BM22 (BM23 Cartridge) (APFSDS)

Unfired length: 610mm
Fired length: INFORMATION

NEEDED

Country of origin: USSR



125mm BM26-1 (BM27-1 Cartridge) (APFSDS)

Unfired length: 610mm Fired length: INFORMATION

NEEDED

Country of origin: USSR



125mm BM42 (BM44 Cartridge) (APFSDS)

Unfired length: 621mm Fired length: 571mm Country of origin: russia





125mm OF26 (HE-frag)

Length with V-429E fuze:

671mm

Length without fuze: 616mm Country of origin: USSR





125mm M86 (HE-frag)

Length with UTIU M85 fuze: 676mm

Length without fuze: INFORMATION NEEDED

Country of origin: Serbia







125mm TK HE (HE-frag)

Length with DRH-05 fuze:

INFORMATION NEEDED

Length without fuze: 700mm Country of origin: Pakistan





125mm HE 1A (HE-frag)

Length with fuze: **INFORMATION**

NEEDED

Length without fuze: **INFORMATION**

NEEDED

Country of origin: India





<u>125mm BK12M</u> (HEAT)

Length with I-238 fuze: 677mm Length without fuze:

INFORMATION NEEDED

Country of origin: USSR





125mm BK14M (HEAT)

Length with V-15 fuze: 677mm Length without fuze: 600mm Country of origin: USSR





125mm BK18M (HEAT) with V-15 fuze: 66

Length with V-15 fuze: 660mm Length without fuze: 600mm Country of origin: USSR











130mm BR-482B (APHE-T)

Length without fuze: 475.23mm Length with fuze: 496.06mm Note: Uses DBR and DBR-2 fuzes.

Country of origin: USSR





130mm M-46 (HE-frag)

Length without fuze: 609.85mm Country of origin: Ukraine





130mm OF-482M (HE-frag)

Length without fuze: 612mm Length with RGM-2 fuze: 670mm Country of origin: russia, Ukraine





130mm OF 482M

(HE-frag)

Length without fuze: INFORMATION NEEDED

Note: Uses the M572E fuze. Country of origin: Croatia





152mm OF22 (rocket-assisted, HE-frag)

Length with fuze: 754mm Note: Uses the RGM-2 fuze.

Country of origin:

russia



152mm OF25

(HE-frag)

Length without fuze: 650mm Length with RGM-2 fuze: ~710mm

Country of origin: USSR



152mm OF29 (HE-frag)

Length without fuze: 662mm

Note: Uses the RGM-2 fuze.

Country of origin: USSR









<u>152mm OF45</u>

(HE-frag)
Length without fuze:

INFORMATION NEEDED

Length with RGM-2 fuze: 864mm

Country of origin: USSR





152mm OF64 (HE-frag)

Length without fuze: 802mm Length with V-429 Fuze: 860mm

Country of origin: russia





152mm OF540 (HE-frag)

Length without fuze: 650mm Country of origin: **INFORMATION**

NEEDED



152mm BP-540 (HEAT)

Length without fuze: 531mm Note: Uses the GPV-3 fuze.

Country of origin: russia





Projectile

(HEAT submunitions)

Length without fuze: INFORMATION

NEEDED

Note: This projectile's designation has not been confirmed yet.
Country of origin: russia

O25 / 3-O-25







152mm S6 and S6-1 (illumination)

Length without fuze:

INFORMATION NEEDED

Note: Uses T-90 Fuze.

Country of origin:

russia







152mm O-13 (fragmentation submunitions)

Length without fuze: 664mm Note: Uses DTM-75 fuze.

Country of origin: USSR



O16 / 3-O-16





152mm Sh2 (flechette)

Length without fuze:

703mm

Note: Uses DTM-75 fuze. Country of origin: russia





152mm Ukrainian-produced Projectiles (fragmentation)

Length without fuze:

INFORMATION NEEDED

Country of origin: Ukraine







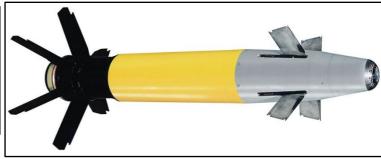




152 mm 30F39 "Krasnopol" (laser guided, rocket assisted, HE-frag)

Length: 1300mm
Note: Uses a T-90 fuze to uncover the optical sensor in the nose. Additionally, an internal impact fuze detonates the warhead.
Country of origin: russia





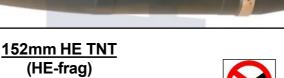




152 mm 30F95 "Krasnopol-M2" (laser guided, rocket assisted, HE-frag)

Length: 1200mm Country of origin: russia





Length with RGM-2 fuze: 695mm. Country of origin: Turkey

Length without fuze: 638.5mm









<u>152mm "1966年式" Type</u> <u>1966</u> (HE-frag)

Length without fuze:

706.6mm

Country of origin: China





155mm M712 Copperhead (HEAT)



Length: 1.37m Country of origin: USA



155mm M795

(HE)

Length without fuze:

748mm

Note: Uses the M739A1

fuze.

Country of origin: USA









155mm M549 and M549A1 (rocket-assisted HEfrag)

Length without fuze:

858mm

Note: Uses the M739A1

fuze.

Country of origin: USA

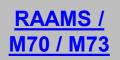




155mm M718 (HEAT submunitions)

Length without fuze: 803mm Length with M577 Fuze: 899mm Country of origin: USA







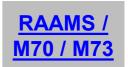


155mm M741 (HEAT Submunitions)

Length without fuze: 803mm Length with M577 Fuze: 899mm

Country of origin: USA







155mm M692

(fragmentation submunitions)

Length without fuze: 803mm

Length with M577 or M762 fuze: 899mm

Country of origin: USA







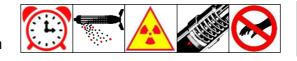
155mm M731

(fragmentation submunitions)

Length without fuze: 803mm

Length with M577 or M762 fuze: 899mm

Country of origin: USA









155mm HE-ER-BT / OFd MKM (HE)

Length without fuze: 818mm Length with KZ-984 fuze: 905mm

Country of origin:

Slovakia





155mm M107 (USA)

(HE)

Length without fuze: 606.81mm Note: Used with several different

fuzes.

Country of origin: USA



155mm M107 (Serbia)

(HE)

Length without fuze:
INFORMATION NEEDED
Country of origin:
Serbia







155mm M107 (India)

(HE)

Length without fuze: 604mm

Country of origin: India









155mm M107 (Slovakia) (HE)

Length without fuze: 601-604mm Length with KZ-984 fuze: 689mm Country of origin: Slovakia





155mm M107 (Pakistan)

(HE)

Length without fuze:

INFORMATION NEEDED

Note: Used with several different

fuzes.

Country of origin:

Pakistan



Kei-181-181 Mar 181-181

155mm NM28

(HE)

Length without fuze:

INFORMATION NEEDED

Length with fuze: **INFORMATION**

NEEDED

Country of origin:

Norway





155mm M1 A4 ERFB/BT (HE)

Length without fuze: 842mm Length with M557P1 fuze: 939mm

Country of origin: India



<u>155mm OE 155 F2</u>

(HE)

Length without fuze:

INFORMATION NEEDED

Length with M557 fuze: 864mm

Country of origin: France





155mm M107 / R-155-M-107

(HE)

Length without fuze: 605mm Note: Uses the M739A1 fuze.

Country of origin: Spain





155mm Vulcano GLR

(HE-Frag, guided)

Diameter of body after firing: **INFORMATION NEEDED**

Wingspan: INFORMATION

NEEDED

Unfired length: **INFORMATION**

NEEDED

Fired length: **INFORMATION**

NEEDED

Country of origin: Italy/Germany



Projectiles, 155mm





155mm BONUS (HEAT submunitions)

Length without fuze: 898mm Note: Uses the FU CHRONO ELN F1

fuze.

Country of origin: France

BONUS



155mm DM702 (HEAT submunitions)

Length with DM52A2 fuze: 898mm Country of origin: Germany



SMArt



155mm M483A1

(HEAT submunitions)

Length without fuze: 803mm Length with M577 or M762 fuze:

899mm

Country of origin: Turkey



M42 and M46



155mm M864

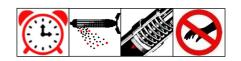
(HEAT submunitions)

Length without fuze: 803mm Length with M577 or M762 fuze:

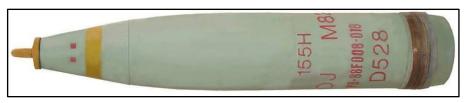
920mm

Country of origin: USA

M42 and M46



Projectiles, 155mm





155mm M825 and M825A1

(smoke / white phosphorus)

Length without fuze: M825: 803mm M825A1: 790mm Length with M577 Fuze:

M825: 899mm M825A1: 886mm Country of origin: USA





155mm DM105 (smoke)

Length without fuze: 779mm Length with DM153 fuze: 875mm







155mm M982 and M982A1

Excalibur

(HE, guided)

Length without fuze: 995.68mm

Country of origin: USA



Projectiles, 170mm





170mm North Korean projectile (model unknown) (HE-frag)

Length without fuze:

INFORMATION NEEDED

Length with fuze:

INFORMATION NEEDED

Country of origin: North Korea



Projectiles, 203mm





203mm OF43 (HE-frag)

Length without fuze: 890mm Note: Uses V-491 fuze.

Country of origin: russia/Ukraine



203mm M106 (HE-frag)

Length without fuze: 798mm Note: Uses the M557 fuze. Country of origin: USA







203mm G-620Sh (concrete-piercing)

Length: 873mm Note: Uses DBT fuze. Country of origin: USSR



Multiple Launch Rocket Systems (MLRS)

Multiple Launch Rocket Systems (MLRS) - one of the types of artillery systems, intended for defeating exposed and hidden enemy personnel, unarmored vehicles and armored personnel carriers, concentrated areas of artillery and mortar batteries, command posts and other targets, as well as for conducting remote mining of terrain.

122mm MLRS 9K51 "Grad" / 9K51M "Tornado-G"





<u>9M22U</u>



9M538



9M22S / MZ-21 and 9M28S



9N510



180 x ML-5



9M28D/9N511



Leaflets



<u>9M53F</u>



9N517F



122mm MLRS 9K51 "Grad" / 9K51M "Tornado-G" Page 2

Yarmuk



R-122



M-21-FK



Grad 2000 / G2000



Grad S



220mm MLRS 9K57 "Hurricane"



9N247M



9N277



9N288



9M27F / 9N128F



220mm MLRS 9K57 "Hurricane", Page 2

<u>9M27K</u>

9N128K

9N235/9N210



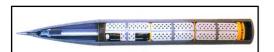




9M27K2

9N128K2

PTM-1







9M27K3

9N128K3









300mm MLRS 9K58 "Smerch" / 9K515 "Tornado-S"





<u>9M528</u>



<u>????</u>



Rockets and Launchers

Rockets are munitions that move with the help of a rocket or jet engine, in which thrust is created as a result of burning fuel throughout the flight. They often have fins for stabilization. Also, a good visual indicator of such a rocket is the presence of one or more venturi (nozzles) in the rear part of the munition.



<u>UB-16-57U</u> (launchers)

Caliber: 57mm
Diameter of body: 321mm

Length: 1678mm

Note: Contains up to sixteen

57mm rockets.

Country of origin: russia





<u>UB-32M</u> (launchers)

Caliber: 57mm

Diameter of body: 464mm

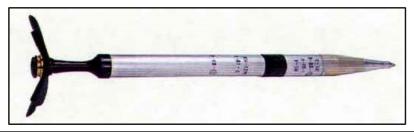
Length: 2080mm

Note: Contains up to thirty-two

57mm rockets.

Country of origin: russia





57mm S-5K (HEAT)

Length: 873.8mm

Warhead length: 121.9mm

Note: Uses the V-5K PIBD fuze.

Country of origin: USSR





57mm S-5KPB (HEAT)

Length: 1.08m

Note: Uses the V-5KP PIBD fuze.

Country of origin: USSR





57mm S-5KO (HEAT)

Length with fuze: 941mm Length without fuze: 819mm Note: Uses the V-5K PIBD fuze. Country of origin: russia/Ukraine





70mm Hydra-70

Length: ~1.4m

Note: These rockets are made of different combinations of fuze, warhead, and rocket motor. The known version in Ukraine is comprised of the M423 or M427 fuze, M151 HE warhead, and MK 66 Series

rocket motors.

Country of origin: USA



M261 (launchers)

Caliber: 70mm Diameter of body: 404mm

Length: 1.66m

Note: Contains up to nineteen

70mm rockets.

Country of origin: USA





B-8M and B-8M1

(launchers)

Caliber: 80mm Diameter of body: 520mm

Length: 2.76m

Note: Contains up to twenty 80mm

rockets.

Country of origin: russia





B8V20-A (launchers)

Caliber: 80mm

Diameter of body: 520mm

Length: 1783mm

Note: Contains up to twenty 80mm

rockets.

Country of origin: russia





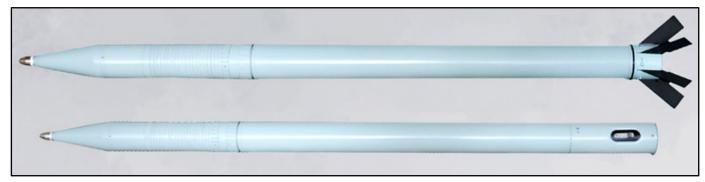




80mm S-8KOM (HEAT)

Length with fuze: ~1550mm Country of origin: russia









80mm RS-80KO (HEAT)

Length with fuze: ~1595mm Country of origin: Ukraine





80mm UAR-80VMZ (HEAT)

Length with fuze: **INFORMATION NEEDED**

Note: Uses the V-5KP1 PIBD fuze.

Country of origin: Bulgaria





80mm ARS-8KOM (HEAT)

Length with AF82 fuze: 1542mm Country of origin: Bulgaria





80mm S-8P (anti-radar / chaff)

Length: 1650mm Wingspan: 384mm Country of origin: russia



82mm OG-82 (HE-frag)

Length without fuze: 623mm Country of origin: USSR



82mm PG-82 (HEAT)

Length without fuze: 694mm Country of origin: USSR



122mm 9M22U (HE-frag)

Length: 2870mm

Note: Uses the MRV-U fuze. Country of origin: russia, Bulgaria **122mm MLRS**









(HE-frag) Length with MRV-U fuze: 2588mm

Note: Uses the 9N549 warhead.

122mm 9M538

Country of origin: russia

122mm MLRS



122mm 9M22S / MZ-21 (incendiary)

Length with TM-120 fuze: 2970mm Note: Uses the 9N510 warhead, which contains 180 incendiary elements.

Country of origin: **USSR**









122mm MLRS

ML-5



122mm MLRS





122mm 9M28S (incendiary)

Length with TM120 fuze: 2298/

2318mm

Note: Uses the 9N510 warhead, which contains 180 incendiary

elements.

Country of origin: russia





122mm 9M28D (propaganda)

Length: 2280mm

Note: Uses the 9N511 warhead,

which contains leaflets. Country of origin: russia











122mm 9M53F

(HE-frag)

Length: 3037mm Note: Uses the 9N517 warhead and 9E260-1 fuze. Country of origin: USSR

122mm MLRS









122mm Yarmuk (HE-frag)

Diameter: 122mm Length: 2875mm Country of origin:



Pakistan

122mm MLRS



122mm R-122 (HE-frag)

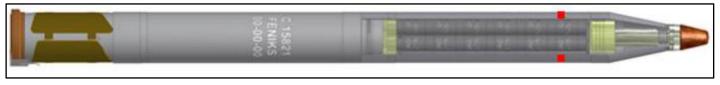
Length: INFORMATION NEEDED

Country of origin: North Korea

122mm MLRS







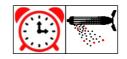
122mm M-21-FK (HEAT submunitions)

Length with Cezar-100M fuze: 2741mm

Country of origin: Poland

122mm MLRS

GKO









122mm Grad 2000 / G2000 (HE-frag) Length: 2875mm

Note: Uses the MRV-U fuze. Country of origin: Serbia **122mm MLRS**



122mm Grad S (HE-frag) Length: 2875mm

Note: Uses the MRV-U fuze. Country of origin: Serbia

122mm MLRS

LAU-10 Series (launchers)

Caliber: 127mm

Diameter of body: 353mm

Length: 2.44m

Note: Contains up to four 127mm rockets.

Country of origin: USA





127mm Zuni

Length: ~2.6m

Note: These rockets are made of different combinations of fuze, warhead, and rocket motor. The known version in Ukraine is comprised of the MK 188 Mod 0 fuze, MK 32 Mod 0 anti-tank/antipersonnel warhead, and

MK 71 Mod 2 rocket motor.

Country of origin: USA





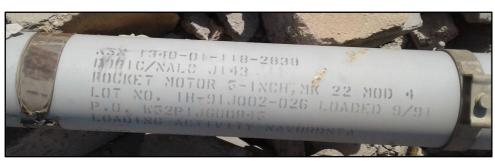




127mm MK 22 Mod 4 Length: 1.95m

Country of origin: USA

M58 MICLIC





Rockets and Launchers, 128-140mm



128mm M63

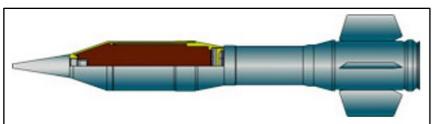
(HE)

Length with UTI M63 fuze: 756mm Country of origin: Former Yugoslavia













140mm OF-45 (HE-frag)

Length: 1125mm Country of origin: russia



Rockets and Launchers, 128-140mm

140mm KIB (engineer cluster ammunition) (bounding fragmentation or HEAT submunitions)

Length: 4000mm

Diameter of rocket motor: 122mm

Note: These rockets are fired from the "ISDM Agriculture" remote mine-laying system.

Country of origin: russia







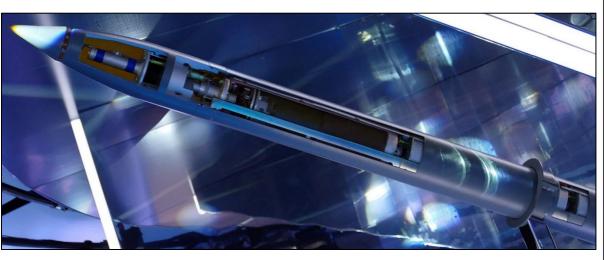














150mm DM-70

Length: ~ 1.6m

Country of origin: russia



UR-77

UR-83P









212mm RGB-60 (HE)

Length without fuze: ~1830mm Note: To adapt this rocket for use on land, theUDV-60 fuze is usually replaced with an MRV-U fuze. Country of origin: russsia



220mm MO.1.01.04M (thermobaric)

Length: 3.7m

Note: Uses the MRV-U fuze. Country of origin: russia









220mm 9M27F (HE-frag)

Length: 4832mm

Note: Uses the 9N128F warhead and

MRV-U fuze.

Country of origin: russia







220mm 9M27K (HE-frag submunitions)

Length: 5178mm

Note: Uses the 9N128K warhead

and TM-120 fuze.

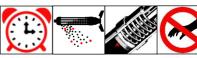
Country of origin: USSR

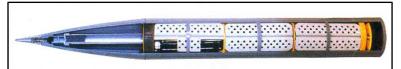
Hurricane

















220mm 9M27K2 (HE submunitions)

Length: 5178mm

Note: Uses the 9N128K2 warhead

and TM-120 fuze. Country of origin: USSR



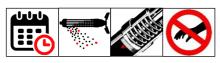
Hurricane



220mm 9M27K3 (HE submunitions)

Length: 5178mm

Note: Uses the 9M128K3 warhead and TM-120 fuze. Each rocket contains 12 KPFM-1S cassettes. Country of origin: USSR/russia







Hurricane







KPFM-1S / 9N223 Cassette

Width: INFORMATION NEEDED Length: INFORMATION NEEDED Height: INFORMATION NEEDED

Note: Each cassette contains 26

PFM-1S submunitions.

Country of origin: USSR/russia



Rockets and Launchers, 240-266mm



240mm S-24B (HE-frag)

Length with V-24A fuze: 2220mm

Tailspan: 600mm Country of origin: USSR



266mm S-25-O (fragmentation)

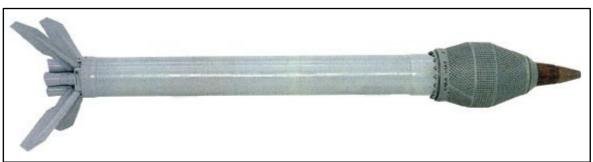
Diameter of body: 266mm Diameter of the warhead: 420mm

Length with fuze: 3760mm

Finspan: 1170mm

Note: Uses the RV-25 fuze. Country of origin: USSR







266mm S-25-OF (HE-frag)

Diameter of body: 266mm

Diameter of the Warhead: 340mm

Length with fuze: 3560mm

Finspan: 1170mm Country of origin:

USSR





Rockets and Launchers, 240-266mm





266mm S-25-OFM (HE-frag)

Diameter of body: 266mm Diameter of the Warhead: 340mm

Length with fuze: 3560mm

Finspan: 1170mm

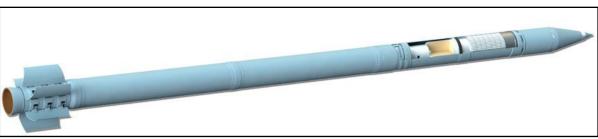
Note: Uses the I-415 fuze. Country of origin: USSR





Rockets and Launchers, 300mm







300mm 9M528 (HE-frag)

Total length: 7600mm Length of Warhead: 2049mm Country of origin: USSR





RPG

RPGs are a category of shoulder-launched munitions that fire rockets and projectiles. Most of them are anti-tank, but some use fragmentation or thermobaric warheads. Almost all models use some kind of self-destruct mechanism.

RPG-7 Series (Page 1)

OG-7



OGi-7MA



PG-7VM



PG-7V



PG-7S



PF69-40 HEI



<u>"69-1式" Type 69-1</u>



<u>OG-7V</u>



TB-7V / TB-7G and TB-7VM / TB-7GM



PG-7VS and PG-7VS1



TBG-7V



PG-7VL and PG-7L



TBG-7L / TBG-7VL



AHG-7SP / AHG-7 SPV



RPG-7 Series (Page 2)

PG-7T



PG-7VR



RTB-7MA / GTB-7MA

GTB-7S



Carl Gustav

FFV441D



FFV401



M540



FFV502



FFV545C



FFV551C



FFV751



RPG, 40mm



40mm OG-7 (HE-frag)

Length without fuze: 256mm Note: Uses the O-4M and GO-2 fuzes.

Country of origin: USSR





RPG-7 Series



40mm OG-7V (HE-frag)

Unfired length: 595mm Note: Usually uses O-4M fuze. Country of origin: Bulgaria







RPG, 40mm



40mm OGi-7MA (HE-frag)

Length without fuze: INFORMATION

NEEDED

Note: Uses the AF72 and AF76 fuzes.

Country of origin: Bulgaria





RPG, 45-58mm



45mm FG-45 (HE) Unfired length: INFORMATION NEEDED Country of origin: russia









DP-64 Anti-saboteur Grenade Launcher

Caliber: 45mm

Country of origin: russia







PG-16 (HEAT)

Diameter: 58mm Fired length: 685mm Unfired length: 980mm

Finspan: 171mm

Launcher Length: 645/1104mm

Country of origin: russia





RPG, 64-66mm



<u>PG-18</u> (HEAT)

Diameter: 64mm Fired length: ~650mm Tailspan: 210mm Launcher Length: 705/1050mm



Note: In the photo the piezoelectric element is

missing.

Country of origin: USSR





M80 (HEAT)

Diameter: 64mm Fired length: 669mm Launcher Length: 800/1200mm

Country of origin: Serbia







RPG, 64-66mm



M72 EC MK1 (HEAT)

Diameter: 66mm

Length: **INFORMATION NEEDED**Launcher Length: 780/980mm
Country of origin: Norway





M72A5 / 66 KES 88 / JVA 2042 (HEAT)

Diameter: 66mm

Length: INFORMATION NEEDED

Launcher Length: 771/981mm

Country of origin: Finland









RPG, 64-66mm



M72A6/A7 (HEAT)

Diameter: 66mm

Length of Rocket: 532mm Launcher Length: 780/981mm Country of origin: Norway





RPG, 68mm



<u>PG-75</u> (HEAT)

Diameter: 68mm Length: 270mm

Launcher Length: 630/890mm Country of origin: Czech

Republic









PG-75 M (HEAT)

Diameter: 68mm

Length: **INFORMATION NEEDED**Launcher Length: 630/890mm

Country of origin: Czech

Republic







RPG, 68mm



<u>PG-76</u> (HEAT)

Diameter:68mm

Length: **INFORMATION**

NEEDED

Launcher Length: 805/1190mm

Country of origin: Poland







PG-7VM/PG-7M (HEAT)

Diameter: 70mm Fired length: 951mm

Country of origin: russia, Bulgaria





RPG-7 Series

PG-7S (HEAT)

Diameter: 70mm Fired length: 670mm Country of origin: russia



RPG-7 Series







PG-7VS and PG-7VS1 (HEAT)

Diameter: 72mm

Unfired length: 925.0mm Country of origin: USSR







RShG-2 "Aglen-2" (thermobaric)

Caliber: 72.5mm

Launcher Length: 770mm Rocket Length: 510mm

Tailspan: 230mm

Country of origin: russia











RPG-22 (HEAT)

Diameter: 72.5mm Rocket Length: 610mm Tailspan: 230mm

Launcher Length: 755/850mm Country of origin: USSR,

Bulgaria





<u>PG-26</u> (HEAT)

Diameter: 72.5mm Rocket Length: 625mm Launcher Length: 770mm Country of origin: USSR





Bulspike-AT/PG-22 (HEAT)

Diameter: 72.5mm

Rocket Length: INFORMATION NEEDED

Launcher Length: **INFORMATION**

NEEDED

Country of origin: Bulgaria





Bulspike-TB/TB-22M

(thermobaric)

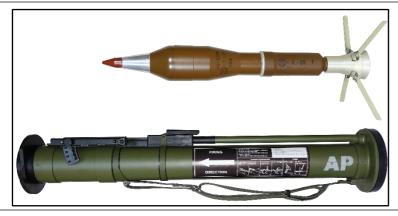
Diameter: 72.5mm

Launcher Length: 765mm

Rocket Length: INFORMATION NEEDED

Country of origin: Bulgaria





Bulspike-AP/OG-22M

(HE-frag)

Diameter: 72.5mm

Launcher Length: 780mm

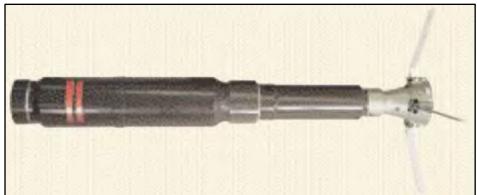
Rocket Length: INFORMATION NEEDED

Country of origin: Bulgaria









MRO-A (thermobaric)

Caliber: 72.5mm

Launcher Length: 900mm Rocket Length: 760mm

Tailspan: 168mm Country of origin: russia













PF69-40 HEI (HE-frag, incendiary)

Diameter: 75mm
Fired length: ~530mm
Country of origin: China







DRTG-73/TG-73 (tandem HEAT)

Caliber: 73mm

Front Warhead Diameter: 50mm Rear Warhead Diameter: 72.5mm

Fired length: ~820mm Launcher Length: ~925mm

Country of origin:

Bulgaria











TB-7V / TB-7G and TB-7VM / TB-7GM

(thermobaric)

Diameter: 70.2mm
Length with GO-2 fuze:
INFORMATION NEEDED
Country of origin: Czech





PG-2 (HEAT)

Diameter: 81.28mm Unfired length: 759.5mm Fired length: 665.5mm Country of origin: USSR





M141 / SMAW-D (anti-bunker)

Diameter: 83mm

Rocket length: 560mm

Launcher length: 792/1371mm

Country of origin: USA









MK 153 / SMAW

(anti-bunker)

Diameter: 83mm Rocket length: 560mm Launcher length: 1360mm Country of origin: USA











84mm AT4CS AST

(antistructure tandem)

Projectile length: INFORMATION

NEEDED

Launcher Length: ~1m

Country of origin: USA, Sweden





84mm FFV401 (shrapnel)

Length of projectile: 177.8mm Length with cartridge: 383mm Country of origin: Sweden

Carl Gustav





Carl Gustav

84mm M540 (HE-frag)

Projectile length: **INFORMATION**

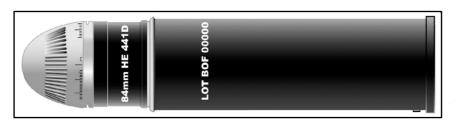
NEEDED

Length with cartridge: 370mm Note: Uses the M840B fuze. Country of origin: Belgium









Carl Gustav

84mm FFV441D (HE-frag)

Projectile length: 180mm

Length with cartridge: 376mm Country of origin: Sweden









84mm FFV502

(HE + HEAT, dual purpose)
Length of projectile: 337mm

Length with cartridge: 437mm Country of origin: Sweden





Carl Gustav



84mm FFV545C

(illumination)

Length of projectile:

INFORMATION NEEDED

Length with cartridge: 466mm Country of origin: Sweden



Carl Gustav



84mm FFV551C

(rocket-assisted, HEAT)

Length of projectile:

INFORMATION NEEDED

Length with cartridge: 645mm Country of origin: Sweden



Carl Gustav



Carl Gustav

84mm FFV751 assisted, tander

(rocket-assisted, tandem HEAT)
Projectile length: INFORMATION

NEEDED

Length with cartridge: 760mm Country of origin: Sweden





84mm AT4 and Pansarskott 86 (HEAT)

Projectile length: 452.3mm Launcher Length: 1020mm Country of origin: USA, Sweden









PG-7V (HEAT)

Diameter: 85.1mm Unfired length: 898.9mm

Note: The warhead is marked with "PG-7G".

Country of origin: USSR



RPG-7 Series



<u>"69-1式" Type 69-1</u> (HEAT)

Diameter: 85mm Unfired length: 926mm

Note: The warhead is marked with "40破".

Country of origin: China



RPG, 90mm

M79A (HEAT)

Diameter: 90mm



Length: 672mm Country of origin: Serbia





M79 "Osa"

Caliber: 90mm

Country of origin: Serbia





RGW90 HH (HEAT/HESH)

Caliber: 90mm Projectile length: 960/1080mm Launcher length:

1010mm

Country of origin: Germany





RPG, 90mm





RGW90 ASM L1A1 (antistructure)

Caliber: 90mm Length: 1000mm Country of origin:

Germany









C90-CR-AM(M3) (HEAT/fragmentation)

Caliber: 90mm Launcher length: 943/983mm Rocket length:

INFORMATION NEEDED

Country of origin: Spain





To the state of th

C90-CR-BK(M3) (antibunker)

Caliber: 90mm Launcher length: 943/983mm Rocket length:

INFORMATION NEEDED

Country of origin: Spain



RPG, 93mm



RPO-A (thermobaric)

Diameter: 93mm

Length of projectile: 548mm Length with cartridge: 920mm

Country of origin: russia

Launch Motor







<u>PG-7T</u> (tandem HEAT)

Diameter:

Front Warhead: 50mm Rear Warhead: 93mm

RPG-7 Series





Length: 990mm

Country of origin: Bulgaria

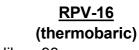




RPG, 93mm







Caliber: 93mm
Length of projectile:
INFORMATION NEEDED

Length with cartridge:
INFORMATION NEEDED
Launcher Length: 924mm





Country of origin: Ukraine





Diameter: 93mm Length: 950mm

Country of origin: USSR







RPG, 93mm



TBG-7L / TBG-7VL "Don" (thermobaric)

Diameter: 93mm

Length: **INFORMATION NEEDED**

Country of origin: russia









RPG, 103mm

GTB-7S (thermobaric)

Diameter: 103mm Fired length: 883mm Country of origin: Bulgaria







RPG, 105mm

TBG-7V (thermobaric)

Diameter: 105mm Unfired length: 900mm Country of origin: russia



RPG-7 Series





RShG-1 "Tavolga-1" (thermobaric)

Caliber: 105mm

Launcher Length: 1135mm

Rocket length: 625mm Country of origin: russia







PG-7VR (tandem HEAT)

Diameter:

Front Warhead: 64mm Unfired length: ~1245mm Rear Warhead: 105mm Country of origin: russia







RPG, 105mm



RMG "Skid" (tandem HEAT)

Diameter:

Front Warhead: 84mm Rear Warhead: 105mm Length of launcher: 1000mm

Length of rocket: **INFORMATION**

NEEDED

Country of origin:

russia















RPG-30 "Hook" (tandem HEAT)

Diameter:

Primary round (PG-30): 105mm Decoy round (IG-30): 42mm Launcher length: 1135mm Length PG-30: INFORMATION

NEEDED

Length IG-30: INFORMATION

NEEDED

Country of origin: russia



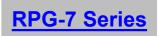
RPG, 105mm



AHG-7SP / AHG-7 SPV (multiple EFP warhead)

Diameter: 105mm Fired length: ~560mm Country of origin: Bulgaria







RPG, 106-125mm

RTB-7MA / GTB-7MA

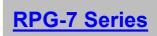
(thermobaric)

Diameter: 106mm

Length: INFORMATION NEEDED

Note: Uses the AF72 and AF76 PD fuzes.

Country of origin: Bulgaria









Panzerfaust 3-IT / DM72A1 (HEAT)

Caliber: 60mm

Diameter of the Warhead: 110mm

Unfired length: 1223mm Fired length: INFORMATION

NEEDED

Country of origin: Germany







RPG, 106-125mm





Bunkerfaust / DM32 (antistructure)

Caliber: 60mm

Diameter of Warhead: 110mm Unfired length: 1220/1270mm

Fired length: **INFORMATION NEEDED**

Country of origin: Germany





APILAS (HEAT)

Caliber: 112mm

Launcher Length: 1260mm Rocket Length: 925mm Country of origin: France





PG-28 "Cranberry-1" (tandem HEAT)

Diameter:

Front Warhead: **INFORMATION**

NEEDED

Rear Warhead: 125mm Launcher Length: 1200mm Rocket Length: INFORMATION

NEEDED

Country of origin:

russia



Guided Missiles

Guided missiles are munitions whose flight path can be adjusted after launch by the operator's commands, or which can be self-guided using their sensors and internal electronics. A good visual indicator is several pairs of wings and the ratio of the number of on-board control and guidance equipment to its dimensions.

Another general rule of thumb is that if a rocket looks very expensive, it's probably a guided missile.

An air-to-air missile is a guided air missile designed to destroy enemy aircraft in aerial combat.

R-27R (HE-frag)

Diameter of body: 230mm

Length: 4.08m Wingspan: 770mm Country of origin: russia







R-37M (HE-frag) Diameter of body: 380mm

Length: 4.06m



Wingspan: 720mm Tailspan: 1020mm Country of origin: russia





5 - FEMAS 26576750 6 - ACM

R-40/K-40 (NATO AA-6) (HE-frag)

Diameter: 310mm Length: 6.23m Tailspan: 390mm

Country of origin: USSR



R-60 (HE-frag)

Diameter of body: 120mm

Length: 2.09m Wingspan: 390mm



Note: Some warhead models contain depleted uranium.
Country of origin: USSR



<u>R-73</u> (HE-frag)

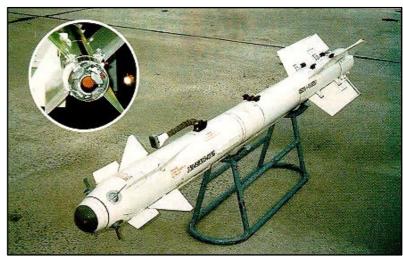
Diameter of body: 170mm

Length: 2.9m Wingspan: 510mm





Note: Some warhead models contain depleted uranium.
Country of origin: russia



<u>R-77</u> (HE-frag)

Diameter of body: 200mm

Length: 3.6m



Wingspan: 454mm Tailspan: 750mm Country of origin: russia





AIM-9M (HE-frag)

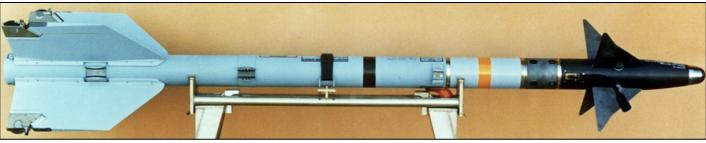
Diameter of body: 127mm

Length: 2.87m Wingspan: 566mm Tailspan: 630mm Country of origin: **USA**









AIM-9X (HE-frag)

Diameter of body: 127mm

Length: 3.02m Wingspan: 353mm Tailspan: 445mm

Country of origin:

USA











Guided Missiles (Air-to-Surface)

The air-to-surface missile (air-to-ground) is a guided air missile designed to destroy targets on the surface of the earth, water, and buried objects. It is part of the aviation complex of missile weapons.

Guided Missiles (Air-to-Surface)



Kh-25 (HE-frag)

Diameter of body: 275mm

Length: 3.57m Wingspan: 820mm

Country of origin: USSR

Note: the missile contains two warheads, one in the front of the missile (F25-1M) and the other in the tail, behind the rocket engine (F25-2M).







2.4PH) MHH.59.59.95 6.802 - 8.203

Kh-25ML (tandem EFP)

Diameter of body: 275mm Length: 3.705m Wingspan: 755mm Country of origin: USSR







Kh-29 Series (HE penetrator)

Diameter of body: 380mm

Length: 3.9m

Wingspan: 1100mm Tailspan: 750mm

Country of origin: USSR



Guided Missiles (Air-to-Surface)



Kh-31P (HE-frag)

Diameter of body: 360mm

Length: 4.7m Wingspan: 914mm Country of origin: russia











Kh-38 Series (HE-frag or penetrator warhead)

Diameter of body: 310mm

Length: 4.2m



Wingspan: 1.14m Country of origin: russia

Guided Missiles (Air-to-Surface)





Kh-39 / Product-305 (HE-frag)



Diameter of body: 200mm

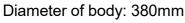
Length: 1.945m

Note: A mockup version is pictured above; the live version, pictured on the right, is not marked with a

thick black band in its center. Country of origin: russia



Kh-58U (HE-frag)



Length: 4.813m



Wingspan: 1170mm

Country of origin: russia/Ukraine





Kh-58UShKE (HE)

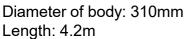
Diameter of body: 380mm

Length: 4.19m Wingspan: 800mm Country of origin: russia



Guided Missiles (Air-to-Surface)

Grom-E1 (HE-frag)





Wingspan: 1.9m Country of origin: russia







9M127-1 Whirlwind-1 (tandem HEAT)

Diameter of body: 138mm

Length: 2.765m

Wingspan: INFORMATION

NEEDED

Country of origin:

russia





AGM-88B HARM (HE-frag)

Diameter of body: 254mm

Length: 4.17m Wingspan: 1.12m Tailspan: 610mm

Country of origin: USA







AASM Hammer (HE-frag)

Diameter of body:

INFORMATION NEEDED

Length: 3m

Wingspan: INFORMATION

NEEDED

Country of origin: France



An surface-to-air missile (anti-aircraft guided missile, ZKR) is a guided missile that is part of an anti-aircraft missile complex, designed to hit air targets: airplanes, helicopters, airships, balloons, various missiles, unmanned aerial vehicles, combat units ballistic missiles, artillery and aviation ammunition.

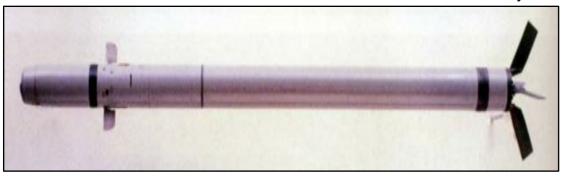
Strela-2 (9K32/9M32) and Strela-2M (9K32M/9M32M)

HATO: SA-7A, SA-7B "Grail"

(HE-frag)

Diameter: 70mm Length: 1440mm

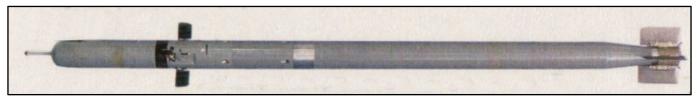
Length of launcher: 1490mm Country of origin: USSR







9K38/9M39 Igla (NATO: SA-18 Grouse) (HE-frag) Diameter of missile: 70mm Length of missile: 1.69m Length of launcher: 1.71m Country of origin: russia













9K333/9M336 Verba (HE-frag)

Diameter of missile: 72mm Length of missile:

INFORMATION NEEDEDLength of launcher:

INFORMATION NEEDED

Country of origin: russia







9K310/9M313 Igla-1 (NATO: SA-16 Gimlet) (HE-frag)

Diameter of missile: 70mm Length of missile: 1.69m Length of launcher: 1.7m Country of origin: russia









Starstreak (HE-frag)

Length: 1397mm Diameter: 127mm

Note: Each missile contains 3 smaller missiles which

independently seek the target.

Country of origin: UK











FIM-92 "Stinger" (HE)

Diameter: 70mm Length: 1370mm

Length of launcher: 1510mm Country of origin: USA

Launch Motor



Battery Coolant Unit

57E6/95Ya6 (HE-frag)

Diameter: 90/170mm Total length: 3160mm

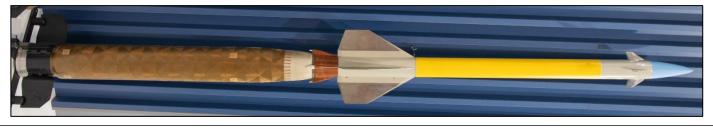


Note: This is a two-stage missile. The first stage is the 95%6 rocket motor. The second stage is the 57%6 missile, which includes the warhead and

fuzing.

Country of origin: russia









9M311 Series

(HE-frag)

Diameter: 76/152mm Total length: 2500mm

Note: This is a two-stage missile.









Strela-1 (9K31/9M31) and **Strela-1M (9K31M9M31M)** (HE-frag)

Diameter: 120mm Length: 1.803m Wingspan: 360mm

Note: The bottom picture on the

left is a training model. Country of origin: USSR





9M37/9M37M (HE-frag)

Diameter: 120mm Length: 2190mm Tailspan: 360mm

Country of origin: russia









9M333 (HE-frag)

Diameter: 120mm Length: 2223mm Tailspan: 360mm Country of origin: russia









9M38/9M38M1 Buk/Buk-M1

(HE-frag)

Diameter of body: 400mm

Length: 5500mm Wingspan: 702mm Tailspan: 860mm Country of origin: USSR







9M317 Buk-M2

(HE-frag)

Diameter of body: 400mm

Length: 5550mm Wingspan: 860mm

Tailspan: INFORMATION

NEEDED

Country of origin: USSR







9M33/9M33M Osa/Osa-M Series (HE-frag)

Diameter of body: 206mm

Length: 3158mm Tailspan: 650mm Country of origin: USSR





IRIS-T (HE-frag) Diameter: 127mm Length: 2.94m

Country of origin: Germany









I-HAWK (HE-frag)

Diameter: 356mm Length: 5.04m Wingspan: 1.204m Country of origin: Spain, USA





Sungur (HE-frag)

Diameter: **INFORMATION NEEDED**Length: **INFORMATION NEEDED**

Country of origin: Turkey







Martlet/LMM (HEAT)

Diameter: 76mm Length: 1.3m

Country of origin: UK







PPZR Piorun (HE-frag)

Diameter: 72mm Length: ~1.6m

Country of origin: Poland







RBS 70 (HEAT)

Diameter: 110mm Length: 1320mm Wingspan: 320mm

Country of origin: Sweden









Mistral (HE-frag)

Diameter: ~92mm Length: 1.86m Wingspan: 200mm Country of origin: France







AIM-120 NASAMS Series (HE-frag)

Diameter: 178mm Length: 3.66m Wingspan: 533mm

Note: This is an air-to-air missile adopted

for air defense (ground-to-air). Country of origin: USA





ASRAAM (HE-frag)

Diameter of body: 166mm

Length: 2.9m Wingspan: 450mm

Note: This is an air-to-air missile adopted for air defense

(ground-to-air).

Country of origin: UK









VT1 (Crotale-NG) (HE-frag)

Diameter of body: 165mm

Length: 2.35m

Wingspan: **INFORMATION**

NEEDED

Country of origin: France





RIM-7 Sea Sparrow Series (HE-frag)

Diameter: 203mm Length: 3.64m Wingspan: 1000mm Country of origin: USA







9M330/9M331 Tor/Tor-1M (HE-frag)

Diameter of body: 235mm

Length: 2898mm Wingspan: 650mm Finspan: 530mm Country of origin: russia





5V27 Series (S-125)

(HE-frag)

Diameter of first stage: 552mm Diameter of second stage: 379mm

Length: 5948mm
Tailspan: 1220mm
Country of origin: USSR,

Poland





5V28 Series (S-200) (HE-frag)

(ΗΕ-τ**ra**ç Diameter: 860mm

Length: 10.8m Wingspan: 2.85m

Note: These are liquid-fueled missiles which use highly toxic and corrosive inhibited red fuming nitric acid (IRFNA).

Country of origin: USSR, Ukraine





48N6/48N6E2 (S-300 and S-400) (HE-frag)

Diameter: 519mm Length: 7.5 m

Tailspan: 1134mm Country of origin: USSR







9M82 (S-300) (HE-frag)

Diameter: 850mm Length: 10 m

Country of origin: russia





9M83 (S-300)

(HE-frag)

Diameter: 500mm Length: 7.5 m

Country of origin: russia





<u>5V55 Series (S-300)</u> (HE-frag)

Diameter of body: 508mm

Length: 7.25 m Tailspan: 1124mm Country of origin: USSR









PAC-3 CRI (Patriot) (HE-frag)

Diameter: 255mm Length: ~5.2m

Wingspan: **INFORMATION NEEDED** Finspan: **INFORMATION NEEDED**

Country of origin: USA









PAC-3 MSE (Patriot) (HE-frag)

Diameter: 297mm Length: ~5.2m

Wingspan: INFORMATION NEEDED

Finspan: 440mm Country of origin: USA





Antitank guided missiles are designed to destroy enemy ground vehicles.

9M111 and 9M111-2 "Fagot" (HEAT)

Diameter: 120mm Fired length: 863mm Wingspan: 369mm



Note: Uses the 9N122 warhead

Country of origin: russia



9M111M "Fagot-M" (HEAT)

Diameter: 120mm Fired length: 863mm Tailspan: 369mm



Note: Uses the 9N122M warhead



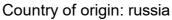






9M113 Konkurs (HEAT)

Diameter: 135mm Wingspan: 468mm Length: 955mm















9M113M Konkurs-M (tandem HEAT)

Diameter: 135mm Length: 1.15m Wingspan: 468mm

Note: Contains a tandem warhead which may or may not

be protruding.





9M117M1-3 "Arkan" (tandem HEAT)

Diameter: 100mm
Unfired length: 1035mm
Country of origin: USSR/russia





9M117M-02 (tandem HEAT)

Diameter: 100mm Unfired length: 1205mm

Note: uses the 9N136M warhead. Country of origin: USSR/russia



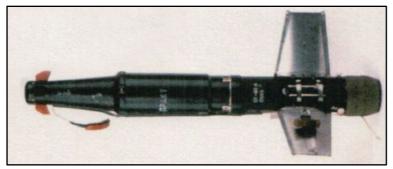


9M119M "Reflex-M" (tandem HEAT)

Unfired diameter: 125mm Unfired length: 700mm Fired length: ~680mm Tailspan: 265mm









9M115/9M116 "Metis" (HEAT)

Diameter: 93mm Length: 730mm Finspan: 370mm

Note: The launch tube is labeled 9M115, the missile itself is labeled

9M116.

Country of origin: USSR





9M131F "Metis-M" (thermobaric)

Diameter: 130mm Length: 920mm

Country of origin: USSR











9M13301, 9M133F and 9M133F-1 "Kornet"

(tandem HEAT or thermobaric)

Diameter: 152mm Length: 1200mm

Country of origin: USSR













NLAW (HEAT)

Diameter: 115mm

Diameter of the Warhead: 150mm Length: **INFORMATION NEEDED**

Length of launcher: 1016mm

Country of origin: UK





Corsar ATGM (tandem HEAT or HE-frag)

Diameter of the Warhead: 107мм

Length: 1022mm

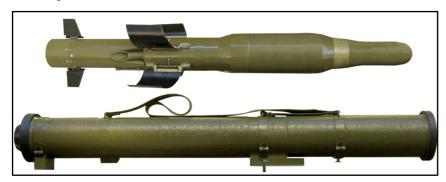
Length of launcher: 1180mm



Note: Can use either the R-3K tandem HEAT or R-3OF HE-frag

missiles.

Country of origin: Ukraine





Brimstone and Brimstone-2 (tandem HEAT)



Diameter: 180mm Length: 1.8m

Country of origin: UK







RBS-17 (tandem HEAT)

Diameter: 180mm Length: 1625mm Wingspan: 362mm Country of origin: Sweden





RBS-56 BILL (HEAT)

Diameter: 150mm Length: 900mm



Country of origin: Sweden









9M120F Ataka (thermobaric)

Diameter: 130mm Length: 1830mm Wingspan: 300mm Country of origin:



russia



Launch Motor



BGM-71F / TOW-2B

(EFP)

Diameter: 152mm Length: 1230mm Country of origin: USA





BGM-71H-RF / TOW BB RF

(anti-bunker)

Diameter: 147mm Length: 1212mm Country of origin: USA





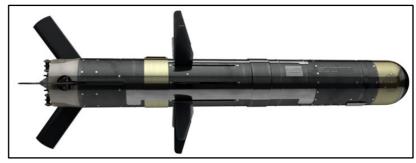


FGM-148 Javelin (tandem HEAT)

Diameter: 127mm Length: 1083mm Country of origin: USA









Milan-2 (HEAT)

Diameter: 115mm Length: 893mm Wingspan: 265mm Country of origin: France





AKERON MP (tandem HEAT)

Diameter: 140mm

Length: **INFORMATION**

NEEDED

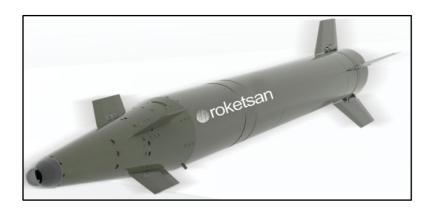
Country of origin: France



Guided Missiles (Surface-to-Surface)

Guided missiles (surface-to-surface) are used in field artillery to deliver high-precision strikes.

Guided Missiles (Surface-to-Surface)



TRLG-230 (HE-frag)

Diameter: 230mm

Length: INFORMATION NEEDED

Country of origin: Turkey







70mm APKWS

Length with fuze: varies

This module converts 70mm Hydra-70 rockets into laser-guided missiles. It can be used with several different warhead and fuze combinations.

Country of origin: USA



A guided missile designed to hit ground targets at long distances with high accuracy. It can move at low altitude along the contours of the terrain, making it difficult to detect.



3M-143



Kalibr / 3M-14 and 3M-54 Series (HE-frag)

Length: 6.2m Diameter: 533mm

Note: There are numerous different models and variants in

this missile family. Country of origin: russia







Kh-22 Series (HEAT or HE-frag)

Diameter: 900-920mm Length: 11650-11670mm

Wingspan: 3m

Note: These are liquid-fueled missiles which use highly toxic and corrosive inhibited red fuming nitric

acid (IRFNA).

Country of origin: USSR





Kh-35 Series (HE penetrator)

Diameter of body: 420mm

Length: 3.85 / 4.4m Wingspan: 1.33m

Country of origin: russia







Kh-55 (HE-frag)

Diameter: 514mm Length: 5880mm Wingspan: 3.1m Country of origin: USSR/russia





Kh-55SM (HE-frag)

Diameter: 770mm Length: 6.04m Wingspan: 3.1m







<u>Kh-59MK2</u> (HE-frag submunitions)

Diameter of body: 380mm

Length: 5.7m Wingspan: 1.3m

Country of origin: russia

Submunition from Kh-59MK2 and Kh-69









Kh-69 (HE penetrating or HE-frag submunitions)

Width of body: 400mm

Length: 4.19m Wingspan: 2.45m Country of origin: russia



Submunition from Kh-59MK2 and Kh-69

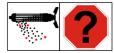






Kh-101 (HE-frag)

Length: 7450mm Diameter: 742mm Wingspan: 3m



Country of origin: russia

Submunition from Kh-101



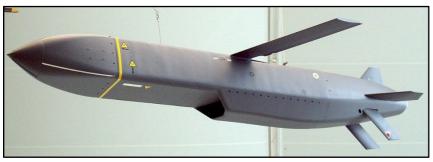


Storm Shadow / SCALP EG (HEAT-HE)

Diameter of body: 630mm

Length: 5.1m Height: 480mm Wingspan: 3m

Country of origin: UK, France











Guided Missiles (Ballistic Missiles)

Ballistic missiles are designed to hit ground targets at long distances using a ballistic trajectory. Ballistic missiles can be launched from various launchers: stationary (launch installations), mobile (on wheeled or tracked chassis, planes, ships and submarines).

Guided Missiles (Ballistic Missiles)







Tochka-U (HE-frag or HE-frag submunitions)

Diameter: 650mm Length: 6400mm Wingspan: 1.41m Tailspan: 1.44m

Country of origin: USSR













Iskander and Iskander-M (HE-frag or HE-frag submunitions)

Diameter: 920mm Length: 7.3m

Country of origin: russia

9B899

9N730





Guided Missiles (Ballistic Missiles)



Kh-47M2 Kinzhal (HE-frag)

Diameter of body: 1.2m

Length:7.2m

Country of origin: russia









MGM-140A ATACMS (HE-frag incendiary submunitions)

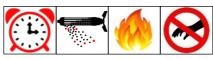
Diameter of body: 607mm

Length: 3.98m

Note: Uses the M219A2 fuze.

Country of origin: USA





Aerial Kamikaze Drones

Drones with a built-in explosive charge or warhead are considered "kamikaze" drones. This section contains examples of this type of drone which fly through the air. They may be single-rotor, multi-rotor, fixedwing, or hybrid.

Kamikaze Drones

KUB (HE-frag)

Wingspan: 1210mm Length: 950mm Height: 165mm

Note: Uses the OFBCh-2.5 warhead.

Country of origin: russia









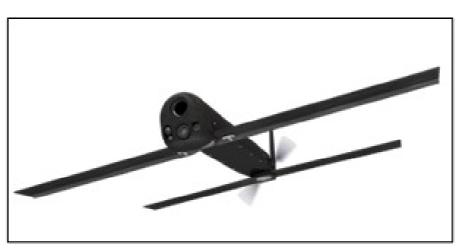
Switchblade 300 (HE-frag)

Wingspan: INFORMATION NEEDED Length: INFORMATION NEEDED

Country of origin: USA







Switchblade 600 (HEAT)

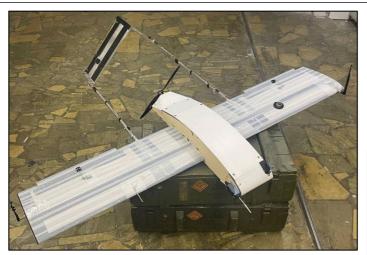
Wingspan: INFORMATION NEEDED Length: INFORMATION NEEDED

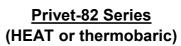
Country of origin: USA













Length: INFORMATION NEEDED
Width of body: INFORMATION NEEDED

Wingspan: 2.2m Country of origin: russia







Lightning-1

Wingspan: ~1.5m

Length: INFORMATION NEEDED

Country of origin: russia



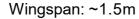




Note: These drones use a wide variety of different warheads and fuzing.



Lightning-2



Length: INFORMATION NEEDED

Note: These drones use a wide variety of

different warheads and fuzing.

Country of origin: russia



















Lancet-3 (HEAT, HE-frag, HE)

Wingspan: ~1.65m



Note: Some contain two warheads - a main KZ-6 charge or HE-frag warhead in the front, and a small explosive charge in the tail.

Country of origin: russia

Length: ~1m





Bulava (EFP/thermobaric)

Wingspan: 1.596m Length: 1.545m

Country of origin: Ukraine







Shahed-131 / Geran-1

(HEAT)

Wingspan: 2.2m Length: 2.6m

Country of origin: Iran













Shahed-136 / Geran-2 Series

Wingspan: 2.5m Length: 3.5m

Note: These drones use a large variety of different warheads which are listed on the

next page.

Country of origin: Iran, russia











HE Penetrator Warhead (HE-frag)





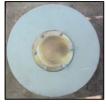


Tandem Precursor
Charge
(HEAT)









BST-52 (HE, incendiary, HEAT)







BSF (HE-frag, incendiary)









OFZBCh-50 (HE-frag, incendiary)









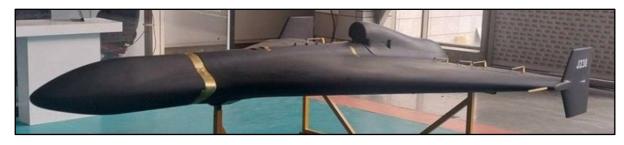
TBBCh-50M (thermobaric, fragmentation)







Enhanced
Thermobaric Warhead
(thermobaric,
fragmentation)





Shahed-238

Wingspan: **INFORMATION NEEDED**Length: **INFORMATION NEEDED**Country of origin: Iran, russia









<u>Gerbera</u> (HE-frag or thermobaric)

Wingspan: ~2.5m Length: ~2m

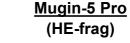


Note: Although most of these drones are used for reconnaissance or as decoys, there are also kamikaze variants. Treat all of them with caution! Country of origin: russia









Length: 3.5m

Width of body: 375mm

Wingspan: 5m

Country of origin: China









<u>Warmate</u> (HE) Wingspan: 1590mm



Length: 1170mm
Country of origin: Poland







VB140 Flamingo

(INFORMATION NEEDED)

Length: INFORMATION NEEDED

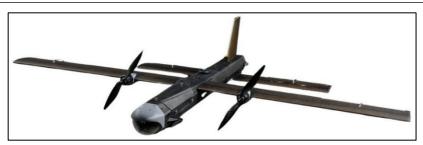
Width of body: INFORMATION NEEDED

Wingspan: 1488mm Country of origin: Ukraine









<u>BATON</u>

(INFORMATION NEEDED)

Length: 1100mm Height: 450mm Wingspan: 1710mm Country of origin: Ukraine





Disruptor

(HE-frag or penetrator warhead)

Length: 3.06m

Width of body: **INFORMATION NEEDED**

Wingspan: 4.8m

Country of origin: USA







FPV Type of UAV

Dimensions: varies
Note: There is a wide variety of
warheads and fuzing systems
used with FPV drones. Always
treat them with caution!
Country of origin: russia, Ukraine



















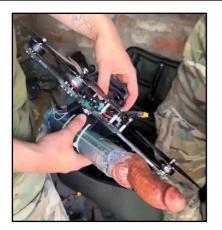
FPV Drones with OFSP-2.5-A133 as Warhead (HE-frag)

Dimensions: varies Country of origin: russia **OFSP-2.5-A133**











FPV Drones with Dildos (HE-frag)

Dimensions: varies

Note: These drones may use sensitive or unstable fuzing. Take caution and do

not be tempted!

Country of origin: russia/Ukraine



Armed Aerial Drones

Armed drones are designed to either drop or fire the ammunition that they carry. This section contains armed drones which fly through the air. They may be single-rotor, multi-rotor, fixed-wing, or hybrid.



Orlan-10 (UAV)

Wingspan: 3m

Length: INFORMATION NEEDED

Note: Most Orlan-10 drones are not armed. The armed version has 2 pods

(total of 4 bombs).

Country of origin: russia





OFSP-08-A133





<u>PD-2</u> (UAV)

Wingspan: 5m Length: 2.85m Height: 1.05m



Note: Munitions may be carried on the wing or inside the fuselage. Country of origin: Ukraine



Revolver 860

(UAV)

Width: 1060mm Height: 490mm

Note: The armed version carries

8 x 60mm bombs

Country of origin: Taiwan











DJI Series

Dimensions: varies
Note: DJI drones can carry a
wide variety of both standard
and improvised ammunition.
Always treat them with
caution!
Country of origin: China











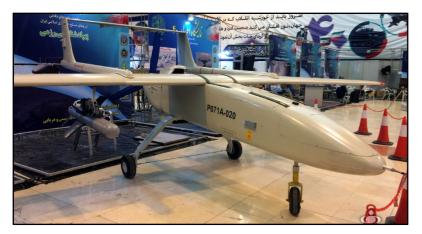


<u>Lastochka-M</u> (UAV)

Wingspan: ~3m Length: ~2m

Country of origin: russia







Mohajer-6 / ER-860 (UAV)

Wingspan: 10m Length: 7.5m Height: 1.9m

Country of origin: Iran

Qaem-5





Punisher (UAV)

Wingspan: 2.9m Length: 1.5m

Country of origin: Ukraine



UB-75HE





Bayraktar TB2

(UAV)

Wingspan: 12m Length: 6.5m

Note: Can carry up to 4

munitions.

Country of origin: Turkey













Orion-E (UAV)

Wingspan: 16m Length: 8m Height: 3m

Country of origin: russia



UAB-20 OFL



<u>Forpost</u>

(UAV)

Wingspan: 9.1m

Length: 6m

Height: INFORMATION NEEDED

Country of origin: russia

UAB-20 OFL





Kamikaze Ground Drones

Drones with a built-in explosive charge or warhead are considered "kamikaze" drones. This section contains kamikaze drones which primarily travel over the ground. They may use wheels, tracks, or both.

Kamikaze Ground Drones





Scorpion-M (UGV)

Dimensions: INFORMATION

NEEDED

Country of origin: russia



Armed Ground Drones

Armed drones are designed to either drop or fire ammunition that they carry. This section contains armed drones which primarily travel over the ground. They may use wheels, tracks, or both.

Armed Ground Drones





Courier (UGV)

Dimensions: INFORMATION NEEDED

Note: May be armed with an AGS-17 automatic grenade launcher or antitank landmines.

Country of origin:

russia







Tarhan Series (UGV)

Dimensions: varies

Note: These drones are designed as minelayers but may also be used in a

kamikaze role.

Country of origin: Ukraine



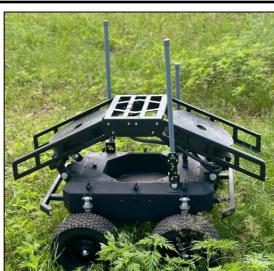






Armed Ground Drones





Ratel S (UGV)

Length: 830mm Width: 740mm Height: 1010.5mm

Note: These drones are designed as minelayers but may also be used in a

kamikaze role.

Country of origin: Ukraine





Ammunition modified to be dropped from drones.			



Drone-dropped PG (HEAT)

Dimensions: varies

Country of origin: russia/Ukraine



KZ-6 Shaped Charge Adopted as <u>Drone-dropped Munition</u> (HEAT)

Dimensions: varies Country of origin: russia/Ukraine













30mm VOG-17M and RHV-HEF Adopted for Dropping from a Drone (HE-frag)

Dimensions: varies Country of origin: russia/Ukraine





40mm VOG-25 Adopted for Dropping from a Drone (HE-frag)

Dimensions: varies Country of origin: russia/Ukraine





G 79. 2.35-76

TM-62M Adopted for Dropping from a Drone (HE)

(⊓⊏)

Dimensions: varies

Country of origin: russia/Ukraine





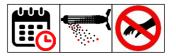






POM-2 Adopted for Dropping from a Drone (fragmentation)

Dimensions: varies Country of origin: russia/Ukraine





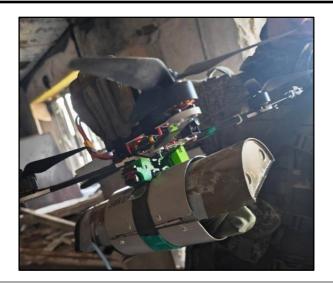
<u>Copy</u> (fragmentation)

(fragmentation)
Dimensions: varies

Note: Uses an electronic fuze with 4 tripwires.
Country of origin: Ukraine





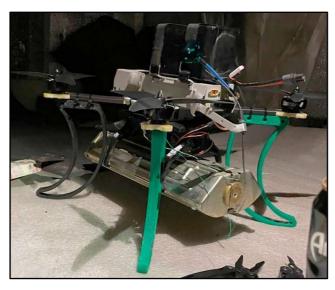


PTM-4 Adopted for Dropping from a Drone (HEAT)

Dimensions: varies

Country of origin: russia/Ukraine





KPFM-1S/9N223 Cassette Adopted for Dropping from a <u>Drone</u> (HE)

Dimensions: varies

Country of origin: russia/Ukraine









<u>Dildo-based Drone Munitions</u> (HE-frag)

Dimensions: varies

Note: These munitions may contain sensitive or unstable

fuzing. Take caution and do not be

tempted!

Country of origin: russia/Ukraine



Mine clearance systems use explosive charges to clear paths through minefields. They can also be used offensively to clear enemy positions.



<u>Minröjningsorm-1</u> (mine-clearing system) Country of origin: Sweden







M58 Series MICLIC (mine-clearing systems)

Note: Uses the MK 22 Mod 4

rocket.

Country of origin: USA



MK 22 Mod 4

















<u>UR-67</u> (mine-clearing system) Country of origin: USSR

150mm DM-70

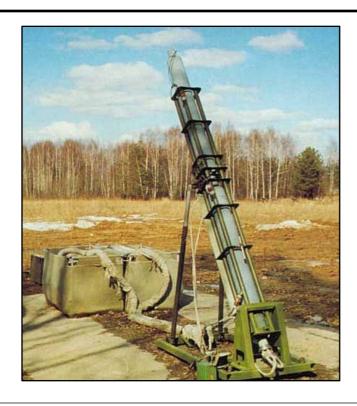




<u>UR-77</u> (mine-clearing system) Country of origin: russia

150mm DM-70





<u>UR-83P</u> (mine-clearing system) Country of origin: russia



150mm DM-70







MPLC (mine-clearing system)
Country of origin: USA







ZRP-2 "Trail"
(mine-clearing system)
Country of origin: russia





Demolition materials consist of the high explosive charges, equipment, initiating devices, and priming materials that are used for military demolition work. This includes trenching charges, shaped charges, bulk explosive charges, detonators, and initiators. They may be used in a wide variety of ways, but are generally utilized to destroy buildings, bridges, railways, roads, military equipment, and captured enemy ammunition.





OZ-1 (cratering charge)

Diameter of Base: 420mm

Height: 900mm

Weight of assembly: 3.5kg Country of origin: russia







<u>SZ-3A</u> (demolition charge)

Height: 98mm Width: 142mm Length: 200mm

Note: This charge is normally used underwater with time fuzes or sabotage

devices.

Country of origin: USSR



1-Pound TNT Block (demolition charge)



Height: 51mm Width: 51mm Length: 178mm Country of origin: USA









KZ-4 (shaped charge)

Diameter: 410mm Height: 440mm

Country of origin: russia







KZ-5 (shaped charge) Diameter: 215mm Height: 451mm Height of the warhead: 280mm

Country of origin: russia







<u>KZ-6</u> (shaped charge)

Diameter: 112mm Height: 292mm

Note: This demolition charge is commonly used as a suicide drone main charge or modified to be

dropped by drones.
Country of origin: russia







<u>KZU</u> (shaped charge)

Height: 195mm Width: 225mm Length: 500mm

Note: May be used with several different

short- and long-delay time fuzes.

Country of origin: russia











<u>KZU-2</u> (shaped charge)

Height: 85mm Width: 105mm Length: 150mm

Note: May be used with several different short- and long-delay time

fuzes.

Country of origin: russia







M3A1 (shaped charge)

Diameter: ~240mm Height: ~750mm

Height of warhead: ~394mm

Weight: ~18 kg

Country of origin: USA









M2A4 (shaped charge)

Diameter: ~180mm Height: ~420mm

Height of warhead: ~305mm

Country of origin: USA





43-Pound Cratering Charge (cratering charge)

Diameter: 210mm Length: 610mm

Country of origin: USA

Demolition Materials



M1A1/M1A2 Bangalore Torpedo

(demolition kit)

Diameter: 54mm Section Length: 1.52m Country of origin: USA



M1A3 Bangalore Torpedo (demolition kit)

Diameter: 54mm

Section Length: 767mm Country of origin: USA





KD No. 8-A

(non-electric detonator)

Diameter: 6.8-7.05mm Length: 45.5-48.5mm

Country of origin: USSR/russia





EDP

(electric detonator)

Diameter: 6.8-7.05mm Length: 45.8-48.5mm

Country of origin: USSR/russia





EDP-r

(electric detonator)

Diameter: 6.8-7.05mm Length: 45.8-48.5mm

Country of origin: USSR/russia



Demolition Materials



M81 (igniter)

Diameter: 19mm

Length of body: 101.6mm Total length: 135.7mm

Note: Used to initiate time fuse or shock tube.

Fuzes

The Fuzes section is divided into the following categories:

- Base Detonating (BD) Fuzes
- Bomb Fuzes
- Guided Missile Fuzes
- Drone Fuzes
- Submunition Fuzes
- Grenade Fuzes
- Mine Fuzes
- Sabotage Fuzes
- Point Detonating (PD)
- Point Initiating Base Detonating (PIBD)
 Fuzes
- Proximity Fuzes
- Time Fuzes

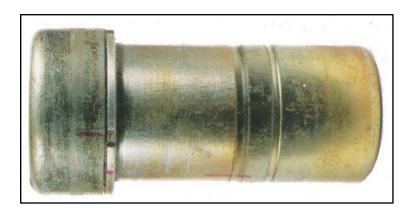
BD Fuzes



DK-2 (impact)

Diameter: 28.64mm Length: 64.25mm Note: Used in PG-2. Country of origin: USSR





<u>DK-4</u> (impact, pyrotechnic delay)

Diameter: 28.6mm Length: 64.5mm Note: Used in PG-2. Country of origin: USSR





MD-5 (impact)

Diameter: 28.96mm Length: 65.79mm

Exposed length: 34.8mm Country of origin: USSR





MD-8 (impact)

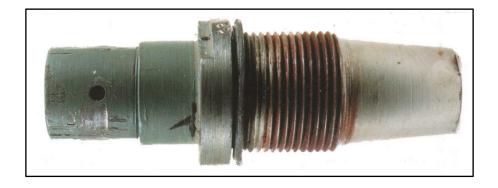
Diameter: 34.15mm Length: 47.35mm

Exposed length: 17.2mm

Note: Used in 57mm, 76mm, 85mm, 122mm and 152mm APHE projectiles.



BD Fuzes



DBR (impact)

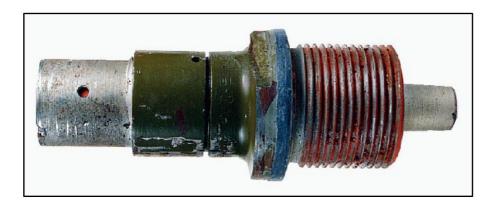
Diameter: 40mm Length: 107mm

Exposed length: 64mm

Country of origin:

russia





DBR-2 (impact)

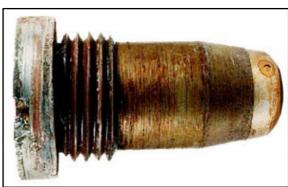
Diameter: 40mm Length: 98mm

Exposed length: 56mm Note: Used in 100mm and 130mm APHE projectiles

Country of origin:

russia





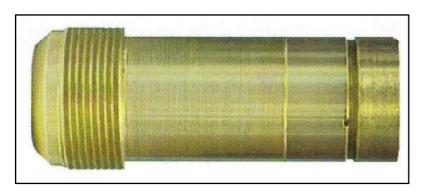
DBT (impact)

Diameter: 65mm Length: 113mm

Note: Used in concretepiercing projectiles. Country of origin:

USSR





M578A1 (impact)

Diameter: 42.7mm Length: 114.2mm

Exposed length: 10.6mm

Note: Used in the 105mm M393A3

projectiles.

Country of origin:

USA



Bomb Fuzes





FMU-152 Series (proximity, impact, electronic delay)

Diameter: 73mm Length: 174mm

Country of origin: USA











<u>DSU-33 Series</u> (proximity sensor)

Diameter: 141mm Length: 318mm

Exposed length: 152mm

Note: Although these sensors do not contain explosives themselves, they are used together

with fuzes such as the FMU-152 series.

Country of origin: USA



Fuze for MAM-L (impact)

Diameter: 135mm Length: 50mm

Country of origin: Turkey





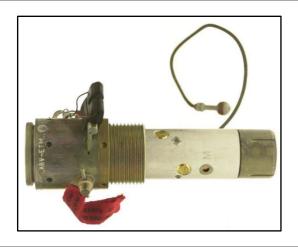
Fuze for MAM-C (impact)

Diameter: 62mm Length: 100mm

Country of origin: Turkey



Bomb Fuzes





<u>AVU-ETM</u> (impact, pyrotechnic delay)

Diameter: 60mm Length: 209mm

Exposed length: 68mm Country of origin: USSR





AVU-ET

(impact, pyrotechnic delay)

Diameter: 60mm Length: 210mm

Exposed length: 68mm Country of origin: USSR







<u>AVK-U</u> (impact, pyrotechnic delay)

Diameter: ~56mm Length: 205mm

Exposed length: 65mm Country of origin: russia





Bomb Fuzes



AVK-P

(impact, pyrotechnic delay)

Diameter: ~56mm Length: ~130mm Exposed length: 65mm Country of origin: Russia









685621573 685621573

Fuze for UMPB D-30SN

Diameter of body: 42mm Length of body: 53mm Country of origin: russia







Guided Missile Fuzes



Fuze for 5V55

Diameter: **INFORMATION NEEDED**Length: **INFORMATION NEEDED**Country of origin: USSR/Ukraine





Fuze for Kh-47M2 "Kinzhal"

Diameter of body: ~60mm Length of body: ~130mm Country of origin: russia





Drone Fuzes



Electromechanical fuze for Shahed-136 / Geran-2 UAV

(impact)

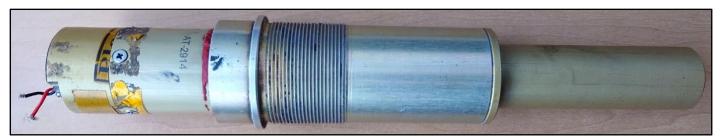
Diameter: 43mm Length: 275mm

Exposed length: 185.5mm

Note: This fuze is used with the HE

Penetrator Warhead. Country of origin: Iran













493M (impact, pyrotechnic delay)

Diameter of body: ~85mm

Length: ~105mm

Note: This fuze is used with the BST-52 and BSF warheads for the Shahed-136 / Geran-2 UAV.

Country of origin: russia



Drone Fuzes



<u>UZ</u> (impact)

Diameter of body: ~45mm

Length: ~95mm

Exposed length: INFORMATION

NEEDED

Note: This fuze is used in Lancet drones and with OFZBCh-50 warheads for the

Shahed-136 / Geran-2 UAV. Country of origin: russia



NU-17 (impact)

Diameter: 37mm
Thickness: 20mm
Exposed length: 4mm

Note: This fuze is used with the TBBCh-50M and enhanced thermobaric warheads for the

Shahed-136 / Geran-2 UAV. Country of origin: russia



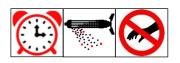


Submunition Fuzes





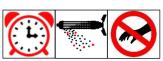
9E246M (impact, pyrotechnic delay) Diameter: 49.6mm Length without detonator:46mm Country of origin: USSR







9E237 (impact, pyrotechnic delay) Diameter: 49.95mm Length without detonator: 58.3mm Country of origin: USSR



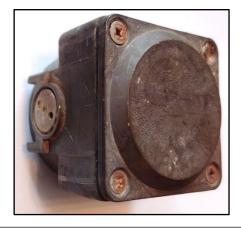
VT-06 (magnetic-influence) Height of body: 76mm Width of Body; 76mm



Thickness: 69mm
Note: Used with the PTM-3
scatterable mines.
Country of origin: russia



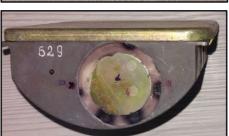




Submunition Fuzes







<u>VT-14</u>

(magnetic-influence)

Length: INFORMATION NEEDED

Width: ~110mm Height: ~55mm

Note: Used with the PTM-4

scatterable mines. Country of origin: russia





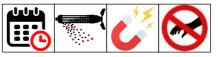


VT-14M

(magnetic-influence)

Length: INFORMATION NEEDED Width: INFORMATION NEEDED Height: INFORMATION NEEDED Note: Used with the PTM-4M

scatterable mines. Country of origin: russia







<u>9E371M</u>

Diameter: **INFORMATION**

NEEDED

Length: **INFORMATION**

NEEDED

Note: Used with the 9N277

submunition.



Submunition Fuzes









<u>136V3</u> (impact)

Diameter of body: 20mm

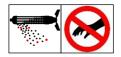
Length: 56mm

Note: Used in submunitions from the

Kh-101, Kh-69, and Kh-59 MK2

guided missiles.

Country of origin: russia





UZRGM and UZRGM-2

(pyrotechnic delay)

Width: 18mm Length: 98mm

Country of origin: USSR





K-510

(pyrotechnic delay)

Length: ~90mm

Note: Used with the K-51 grenade.

Country of origin: russia







UDZ

(impact, pyrotechnic delay)

Dimensions: 43x58x90mm Note: Used with the RGO and

RGN grenades.

Country of origin: USSR









M213

(pyrotechnic delay)

Width: 84.6mm

Exposed length: ~23mm

Note: Used with the M67 grenade.









DM82A3

(pyrotechnic delay)

Width: 22mm Length: 81mm

Note: Used with the DM51 grenades.

Country of origin: Germany









JVA 1634 (pyrotechnic delay)

Width: 18mm Length: 75.5mm Note: Used with the Sirpalekäsikranaatti M/50

grenade.

Country of origin: Finland







M204A2

(pyrotechnic delay)

Width: **INFORMATION NEEDED**Length: **INFORMATION NEEDED**Note: Used with the MK2 MOD 44

grenade.

Country of origin: Turkey







AF11 (FD-1) (pyrotechnic delay)

Width: 47mm Length: 85mm

Note: Used with the GHO-1 grenade.

Country of origin: Bulgaria







M72A1

(pyrotechnic delay)

Width: **INFORMATION NEEDED**Length: **INFORMATION NEEDED**Note: Used with the M72 grenade.

Country of origin: Belgium











FGM-1

(pyrotechnic delay)
Width: INFORMATION

NEEDED

Length: **INFORMATION**

NEEDED

Note: Used with the GMO-1 / M92 and GMM grenades. Country of origin: Romania





FG-MR

(pyrotechnic delay)

Width: INFORMATION NEEDED Length: INFORMATION NEEDED

Note: Used with the F-1 and RG-42 grenades.

Country of origin: Romania







JVA 1665

(pyrotechnic delay)

Width: INFORMATION NEEDED
Length: INFORMATION NEEDED
Note: Llood with the IVA 0406 gropes

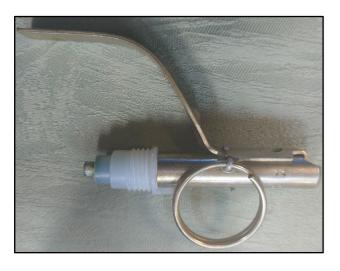
Note: Used with the JVA 0406 grenade.

Country of origin:

Finland







<u>U-517M</u>

(pyrotechnic delay)

Width: 10mm

Total length: 95mm Length of body: 73mm

Note: Used with the RGR, RDG-M, and

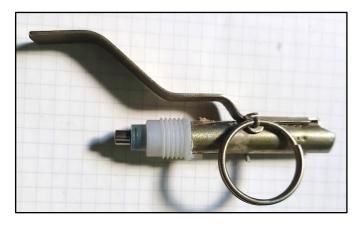
Zarya-3 grenades.

Country of origin: russia









<u>U-515M</u> (pyrotechnic delay)

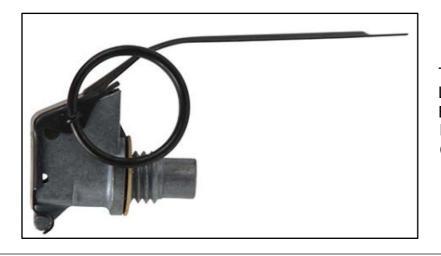
Width: 10mm

Total length: ~100mm Length of body: 70mm

Note: Used with the Zarya-3 grenade.

Country of origin: russia





M201A1

(pyrotechnic delay)

Total length: 99mm Length of body: 41mm Exposed length: 21mm

Note: Used with the M18 grenade.







Mle F3

(pyrotechnic delay)

Width: **INFORMATION NEEDED**

Length: **INFORMATION**

NEEDED

Note: Used with the OF 37

grenades.

Country of origin: France









Mle F10 (pyrotechnic delay)

Width: **INFORMATION NEEDED**

Length: 90mm

Note: Used with the GR MA FUM

56 grenades.

Country of origin: France







Mle F13 (pyrotechnic delay)

Width: 21mm

Length: **INFORMATION NEEDED**Note: Used with the OF F1A grenades.

Country of origin:

France









DVM

(pyrotechnic delay)
Width: INFORMATION NEEDED

Length: **INFORMATION NEEDED**Note: Used with the plastic-bodied RGD-5 and the RGO-78.

Country of origin: Bulgaria







<u>MVM</u>

(pressure-activated)

Diameter: 81mm Height: 45mm

Note: Used in TM-46 and TMN-46 anti-tank mines. Country of origin: USSR







<u>MVZ-57</u> (pressure-activated)

Diameter: 89mm Height: 55mm Note: Used in TM-57 antitank landmines. Country of origin:

USSR





MD-2

(non-electric detonator)

Bushing diameter: 13mm

Length: 52-56mm

Country of origin: USSR





MD-5M

(non-electric detonator)

Diameter: 13.9mm Length: 46.5mm







MVP-62 (pressure-activated)

Diameter: 125mm Height: 86mm

Note: Used in TM-62 series antitank

mines.

Warning: Minimal metal fuze.

Country of origin:

USSR







MVP-62M (pressure-activated)

Diameter: 125mm Height: 90mm

Note: Used in TM-62 series antitank

mines.

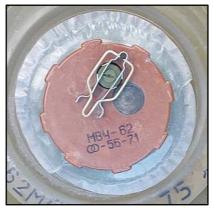
Warning: Minimal metal fuze.

Country of origin:

russia







MVCh-62 (pressure-activated)

Diameter: 135mm Height: 60mm

Note: Used in TM-62 series

antitank mines.

Country of origin: USSR







MVN-72 (magnetic influence)

Diameter: 125mm Height: 96mm









MVN-80

(magnetic influence and pressure-activated)

Diameter: 128.5mm Height: 97mm

Country of origin: russia











ZN-97.1

(magnetic-influence)

Diameter: 163mm Height:90mm

Country of origin: Poland















VPDM-1M

(tilt rod)

Diameter: **INFORMATION NEEDED** Length: **INFORMATION NEEDED**

Note: Used with the PDM-1M anti-

landing mine.

Country of origin: russia







MVSh-57 (tilt rod)

Diameter: 80mm Length: 178mm

Note: Used with the TM-57 antitank mine.





MUV

(pull, pressure, or tension-release)

Diameter: 12.3mm

Length (without detonator): 74mm Note: May have a plastic body. Country of origin: USSR







MUV-2 (pull/pressure)

Diameter: 12.3mm

Length (without detonator): 86mm

Country of origin:

USSR









MUV-3 (pull/pressure)

Diameter: 12.3mm

Length (without detonator): 86mm

Country of origin: USSR









MUV-4 (pull/pressure)

Diameter: 17mm Length: 113mm

Note: May have a plastic







MVE-72 (breakwire)

Diameter: 61mm Length: 145mm

Note: Has approximately 60 meters of breakwire. Country of origin: USSR









MVE-92 (breakwire)

Diameter: 86мм Length: 50мм Note: Has approximately 80 meters of breakwire. Country of origin: USSR







MVE-NS (breakwire and antidisturbance)

Power unit:
Length: 90mm
Width: 58mm
Height: 23mm

Initiating unit;
Diameter:31mm
Length: 90mm

Note: Has approximately 40 meters of

breakwire.

Country of origin:

USSR





<u>VPF</u> (pull)

Diameter: 12мм Length: 77мм





NVU-P "Okhota" (seismic-influence)

Diameter: 155mm Height: 360mm

Country of origin: USSR















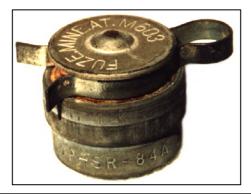
Mintändare m/47 (pressure-activated)

Diameter: **INFORMATION NEEDED**

Height: 69mm

Country of origin: Sweden





<u>M603</u>

(pressure-activated)

Diameter: 29.7mm Height: 28.9mm

Country of origin: USA





UTMAH-4

(pressure-activated)

Diameter: 38mm Height: 55mm

Country of origin: Former Yugoslavia







M/66 (pressure-activated)

Diameter: 30mm

Length without detonator: 37mm Note: Used in the Pansermine M/56

antitank landmines.

Country of origin: Denmark







P-62 (pressure-activated)

Diameter: **INFORMATION**

NEEDED

Height: **INFORMATION**

NEEDED

Country of origin: Romania







ATM-01TAC (pressure-activated)

Diameter: 150mm Height: 92mm

Country of origin: Bulgaria



Sabotage devices are designed to initiate emplaced demolition or incendiary charges. They are usually based on a mechanical or electrical timer, but command initiation, either wired or wireless, may also be used. As the charges are usually emplaced to destroy critical targets (bridges, roads, installations, etc.) antidisturbance, anti-handling, and anti-withdrawal features are often incorporated to prevent EOD personnel from disarming these devices.



VZD-1M (mechanical delay)

Diameter: 24mm Length: 112mm

Exposed Length (with cap): 30mm

Country of origin: USSR







VZD-3M (mechanical delay)

Diameter:13mm Length without detonator: 66mm

Length with detonator MD-5M: 114mm

Country of origin: USSR





VZD-6Ch

(mechanical delay)
Length without detonator:

85mm

Width: 45mm Thickness: 20mm



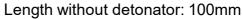






VZD-144 (mechanical delay)





Country of origin: USSR







VZD-144Ch (mechanical delay)

Diameter: 48мм

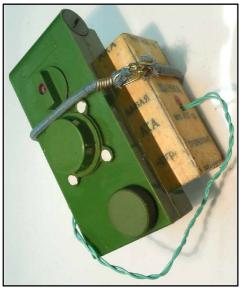
Length without detonator:

63мм

Length with MD-5M detonator: 122mm Country of origin: russia







BKM-6 (radio command, concussion influence)

Note: The system consists of one VZDA-16Ch firing device and up to five VZDP-16Ch sensors. Each sensor can be initiated by radio command or concussion influence.

Length: 152mm Width: 66mm Height: 10mm









M147 (electronic delay)

Length without detonator: 64мм

Width: 51mm Thickness: 30mm Country of origin: USA









AG-23 (impact)

Diameter: 19.8mm Length: 56mm

Exposed length: 31mm Country of origin: USSR





A-670M

(impact, pyrotechnic delay)

Diameter: 19.8mm Length: 67.82mm

Exposed length: 38.6mm

Country of origin:

USSR





KZ-984 (impact)

Diameter: 60mm Length: 143mm

Exposed length: 86.9mm Country of origin: Slovakia





<u>AF621 (M-6N)</u>

(impact)

Diameter: 48.5mm Length: 88.5mm

Country of origin: Bulgaria



MG-25 (impact, pyrotechnic delay)

Diameter: 20mm Length: 52.8mm

Exposed length: 30.73mm Country of origin: USSR











V19U and V19UK (impact, pyrotechnic delay)

Diameter: 20mm Length: 55mm

Exposed length: 31mm Country of origin: USSR





B-23A and B-23M (impact)

Diameter: 20mm Length: 44.74mm

Exposed length: 31.2mm

Note: Used with 23mm OFZ (HEI

projectiles)

Country of origin: USSR





O-4M (impact)

Diameter: 39mm Length: 82mm

Exposed length: 50mm

Country of origin: USSR, Bulgaria







VMG-K and VMG-M

(impact, pyrotechnic delay)

Diameter: 30mm Length: 51mm

Exposed length: 27mm Country of origin: USSR









VMG-P

(impact, pyrotechnic delay)

Diameter: 29mm Length: 57mm

Exposed length: 30mm Country of origin: USSR







AF35

(impact, pyrotechnic delay)

Diameter: INFORMATION NEEDED
Length: INFORMATION NEEDED

Exposed length: INFORMATION NEEDED

Country of origin: Bulgaria





AF41

(impact, pyrotechnic delay)

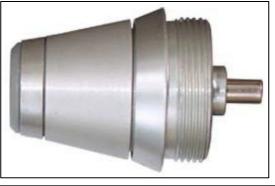
Diameter: **INFORMATION NEEDED**Length: **INFORMATION NEEDED**

Exposed length: INFORMATION NEEDED

Country of origin: Bulgaria









AF43

(impact, pyrotechnic delay)

Diameter: INFORMATION NEEDED
Length: INFORMATION NEEDED
Exposed length: INFORMATION

NEEDED

Country of origin:

Bulgaria







M-6 (impact)

Diameter: 39.37mm Length: 82.55mm

Exposed length: 51.6mm

Note: The body can be made of metal or

bakelite.

Country of origin: USSR



M6 (impact)

Diameter: 40mm Length: 83mm

Length of exposed portion with cap: 50mm

Country of origin: Bulgaria





V-5M1

(impact, pyrotechnic delay)

Diameter: 39.9mm Length: 157mm

Exposed length: 84.1mm Country of origin: USSR





KTM-1 (impact)

Diameter: 39.6mm Length: 95.2mm

Exposed length: 52.6mm Country of origin: USSR





AF611 (impact)

Diameter: 40mm Length: 83.4mm

Exposed length: INFORMATION

NEEDED

Country of origin: Bulgaria



O-4N (impact)

Diameter: INFORMATION NEEDED
Length: INFORMATION NEEDED
Exposed length: INFORMATION

NEEDED

Country of origin: Bulgaria





B-37 and MG-37 (impact, pyrotechnic delay)

Diameter: 29.7mm Length: 82.5mm

Exposed length: 63mm Country of origin: USSR







<u>迫-1甲 Type 1 PD Fuze (mortar)</u> (impact)

Diameter: 40mm Length: ~76mm

Exposed length: ~36mm Country of origin: China





M-5 and M-5M (impact)

Diameter: 40mm Length: 66mm

Exposed length: 36.1mm Country of origin: USSR





MG-N (impact)

Diameter: 40mm Length: 99mm

Exposed length: 43.18mm Country of origin: USSR



MG-57 and MGZ-57 (impact, pyrotechnic delay)

Diameter: 40mm Length: 84.8mm

Exposed length: 47mm Country of origin: USSR





UTIU M85 (impact)

Diameter: 40mm Length: 109mm

Exposed length: 62mm Country of origin: Serbia





V-25 (impact)

Diameter: 40mm Length: 114.3mm

Length (without cap): 111.25mm

Exposed length: 68.1mm

Exposed Length (without cap): 66mm

Country of origin: USSR







M-12 and V-22 (impact)

Diameter: 40 or 50mm Length: 117-119mm

Exposed length: 71-74mm Country of origin: USSR



DM111A2 / DM 111 A2

(impact)

Diameter: 49mm Length: 87mm

Exposed length: 61mm

Country of origin: Portugal, Germany





M525 Series

(impact)

Diameter: 49mm Length: 96mm

Exposed length: 61.5mm Country of origin: USA





GK-2 (impact)

Diameter: 40mm Length: 101.3mm Exposed length: 75mm Country of origin: USSR







GO-2 (impact)

Diameter: 40mm Length: 131mm

Exposed length: 77mm

Notes: Used with OG-7, OG-9

and OG-15 projectiles. Country of origin: USSR,

Bulgaria





V-491 (impact)

Diameter: 64mm Length: ~156.5mm

Exposed length: ~116mm Country of origin: USSR



UT M18 (impact)

Diameter: 49mm Length: 92.3mm

Exposed length: **INFORMATION NEEDED**

Country of origin: Serbia







V-429 and V-429E (impact)

Diameter: 41mm Length: 105mm

Length of exposed portion without cap: 58mm

Country of origin: USSR





B429E (impact)

Diameter: 40mm Length: 105.7

Exposed length: 58.9mm

Note: This is a copy of the Soviet V-429.

Country of origin: Iran



M739A1 (impact)

Diameter: 61mm Length: 152mm

Exposed length: 96mm

Note: Used with 105mm and 155mm HE

shells of the NATO standard.

Country of origin: USA





3V35 (impact)

Diameter: 37.5mm Length: 140mm

Exposed length: 75mm Country of origin: USSR





AZ111 and AZ111-A2 (impact)

Diameter: 49mm Length: 87mm

Exposed length: 61mm Country of origin: Iran



M/49/62 (impact)

Diameter: 31.5mm

Length: INFORMATION NEEDED

Length of exposed portion without cap: 55mm Length of exposed portion with cap: 57mm

Country of origin: Denmark





<u>M783</u> (impact)

Diameter: 49mm Length: 94.5mm

Exposed length: 66mm Country of origin: USA







RGM, RGM-2, and RGM-2M (impact)

Diameter: 39.8mm Length: 102.3mm

Exposed length: 56.5mm Country of origin: USSR







M557 (impact)

Diameter: 61mm Length: 151mm

Exposed length: 94mm

Note: The front of the fuze is often torn off during impact. However, the remaining base portion still contains functioning, hazardous elements.

Country of origin: USA





<u>M557P1</u> (impact)

Diameter: 61mm Length: 151mm

Exposed length: 96.4mm

Note: This is a copy of the American

M557 fuze.

Country of origin: India



PDM 557 (impact)

Diameter: 61mm Length: 151mm

Exposed length: 94 mm

Note: This is a copy of the American

M557 fuze.

Country of origin: Pakistan





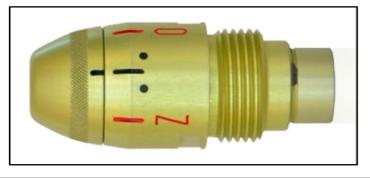
M51A5 (impact)

Diameter: 61mm Length: 151mm

Exposed length: 95mm

Note: The front of the fuze is often torn off during impact. However, the remaining base portion still contains functioning,

hazardous elements. Country of origin: USA



ZGM (impact)

Diameter: 40mm

Length: 96.3mm
Exposed length: INFORMATION

NEEDED

Country of origin: Poland











DM321

(impact, pyrotechnic delay)

Diameter: INFORMATION NEEDED

Length: 78.6mm

Exposed length: 42.2mm Country of origin: Germany





AF72 (impact)

Diameter: 40mm Length: 133mm

Length without detonator: 114mm Exposed Length with cap: 72mm

Country of origin: Bulgaria





AF76 (impact)

Diameter: 40mm Length: 133mm

Exposed length: INFORMATION

NEEDED

Country of origin: Bulgaria







<u>M935</u>

(impact) Diameter: 50mm Length: 90.9mm

Exposed length: 63mm Country of origin: USA



<u>M751</u> (impact)

Diameter: 49mm Length: 104mm

Exposed length: 66mm Country of origin: USA





AF69 (impact)

Diameter: 40mm Length: 122mm

Exposed length: 71mm Country of origin: Bulgaria



AR-MDH (impact)

Diameter: 49mm Length: 95mm

Exposed length: 68mm Country of origin: Bulgaria





PDB 332 (impact)

Diameter: 49mm Length: 95mm

Exposed length: 67mm Country of origin: Spain



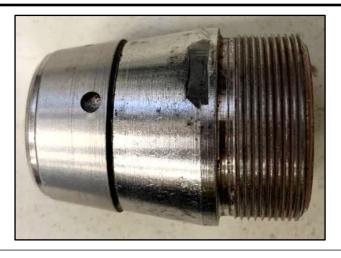
UTI M63 (impact)

Diameter: 38mm Length Without Cap: 67mm Exposed Length Without Cap: 32mm Country of origin: Former Yugoslavia









<u>U-518M</u>

(impact, pyrotechnic delay)

Diameter: 29mm

Length without detonator: 38.5mm

Exposed length: 26mm Country of origin: russia











<u>U-404</u> (impact)

Diameter: 76mm Length: 153.5mm Exposed length:

INFORMATION NEEDEDCountry of origin: russia





UT M68P1 (impact)

Diameter: 46mm Length: 87mm

Exposed length: 61mm

Country of origin: Ukraine, Former

Yugoslavia, Serbia



V-24A (impact)

Diameter: 80mm Length: 229mm

Exposed length: 92mm Country of origin: USSR





MJ-7 (impact)

Diameter: 40mm Length: 87mm

Exposed length: 38mm Country of origin: China





UTIU M72B1

(impact)

Diameter: 40mm Length: 105mm

Exposed length: 58mm Country of origin: Serbia





MRV-U (impact)

Diameter: 64mm Length: 195mm

Exposed length: 141.1mm Country of origin: USSR





(impact) Diameter: INFORMATION NEEDED Length: INFORMATION NEEDED



Exposed Length: INFORMATION NEEDED Note: This is a copy of the Soviet MRV fuze.

Country of origin: North Korea

PIBD Fuzes





VP-9 (point element) (impact, pyrotechnic delay)

Diameter: 24.63mm Total length: 91.08mm

Length (without cap): 87.36mm Exposed length: 54.44mm Length of exposed portion (without cap): 51.15mm Country of origin: USSR









VP-7, -9, -16, and -18 (base elements) (impact, pyrotechnic delay)

Diameter: 37.16mm Length: 74.03mm Country of origin: USSR







VP-22

(impact, pyrotechnic delay)

Diameter: 37mm Length: 73.4mm

Country of origin: USSR









AZ-Z DM451 (impact, pyrotechnic delay)

Diameter: 40mm

Length: INFORMATION NEEDED

Exposed length:

INFORMATION NEEDEDCountry of origin: Germany





PIBD Fuzes



<u>I-238</u> (impact)

Diameter: 40mm Length:159mm Exposed length:



INFORMATION NEEDEDCountry of origin: USSR



GPV-2 (impact)

Diameter: 40mm Length: 98mm

Exposed length: 56mm Country of origin: USSR





GPV-3 (impact)

Diameter: 40мм Length: 120мм

Exposed length: 81mm Country of origin: USSR







V-5K (impact)

Diameter: 40mm Length: 120mm

Exposed length: 104mm Country of origin: USSR



Proximity Fuzes



AR-5 (proximity, impact)

Diameter: 42mm Length: ~140mm

Exposed length: ~90mm Country of origin: USSR





AR-6

(proximity, impact)

Diameter: 66mm Length: ~250mm

Exposed length: ~200mm Country of origin: USSR





AR-27

(proximity, impact)

Diameter: INFORMATION NEEDED Length: INFORMATION NEEDED

Exposed length:

INFORMATION NEEDEDCountry of origin: USSR





9E260-1

(proximity, impact)

Diameter: **INFORMATION NEEDED**

Length: 298mm

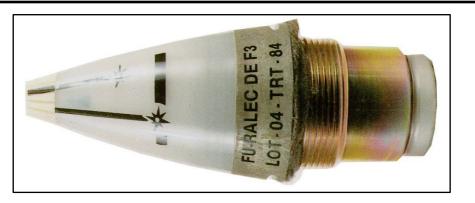
Exposed length: INFORMATION NEEDED

Country of origin: russia





Proximity Fuzes



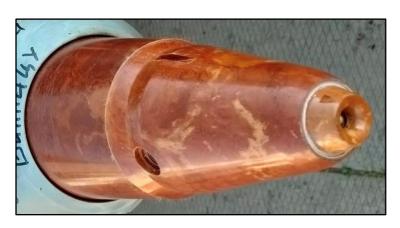
FU RALEC DE F3

(proximity, impact)

Diameter: 61mm Length: 151mm

Exposed length: 99mm Country of origin: France





RV-25 (proximity)

Diameter: 170mm Length: 453mm

Exposed length: INFORMATION NEEDED

Country of origin: USSR





BU-105 M79

(proximity, impact)

Diameter: 60mm Length: 133mm

Exposed length: 76mm Country of origin: Serbia







ÖF ZONAR 75B MK

(proximity, impact)

Diameter: 61mm Length: 164mm

Exposed length: INFORMATION

NEEDED

Country of origin:

Sweden



D-1 and D-1U (pyrotechnic delay, impact)

Diameter: 40.39mm

Length without cap: 106mm



Exposed Length without Cap:

59.9mm

Country of origin: USSR











<u>T-1</u> (pyrotechnic delay, impact)

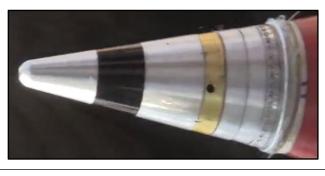
Diameter: 40.39mm

Length without cap: 71.1mm

Exposed length without Cap: 59.9mm

Country of origin: USSR





T-7 (pyrotechnic delay, impact)

Diameter: 64mm Length:157mm

Exposed length: 128mm

Country of origin: USSR







DTM-75 (mechanical time delay)

Diameter: 63mm Length: 139mm

Country of origin: USSR





T-90 (mechanical time delay)

Diameter: 41mm Length: 108mm

Exposed length: 61mm Country of origin: USSR







TM-120 (mechanical time delay)

Diameter: 64mm Length: 195mm

Exposed length:140mm Country of origin: russia





M776

(mechanical time delay, impact)

Diameter: 49mm Length: 87.6mm

Exposed length: 60mm Country of origin: USA





M67 (pyrotechnic delay)

Diameter: 78.7mm Length: 78mm

Exposed length: 69mm Country of origin: Serbia





DM153

(mechanical time delay, impact)

Diameter: 60.9mm Length: 117.3mm

Exposed length: 96.4mm Country of origin: Germany





M767A1

(electronic time delay, impact)

Diameter: 61mm Length: 134mm

Exposed length: 95.5mm Country of origin: USA







M577

(mechanical time delay, impact)

Diameter: 61mm Length: 134mm

Exposed length: 96mm Country of origin: USA





M762

(electronic time delay, impact)

Diameter: 61.2mm Length: 133.9mm

Exposed length: 95.5mm Country of origin: USA





DM52A2

(electronic time delay, impact)

Diameter: 61mm Length: 135mm

Exposed length: 97mm Country of origin: Germany





FU CHRONO ELN F1

(electronic time delay)

Diameter: INFORMATION NEEDED

Length: 134.4mm

Exposed length: ~114mm Country of origin: France



Propellant charges are designed to accelerate projectiles.

Propellant Charge for PG-7 Series

Diameter: 40mm Length:~270mm Finspan: 285mm

Country of origin: USSR, Bulgaria

RPG-7 Series











PG-7 Flight Motor (PG-7P)

Diameter: 40mm Length:~270mm

Note: These rocket motors often separate from the warhead on impact.
Country of origin: USSR,

Bulgaria

RPG-7 Series







Propellant Charge for OG-9 and PG-9

Diameter: **INFORMATION NEEDED**Length: **INFORMATION NEEDED**

Note: Has an electric primer. Country of origin: USSR, Bulgaria





Propellant Charge for OG-15 and PG-15

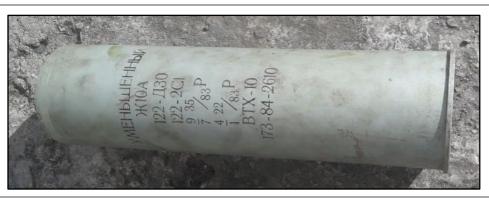
Diameter of body: 73mm

Length: 112mm

Note: Has an electric primer. Country of origin: USSR,

Bulgaria





Propellant Cartridge for 122mm Artillery Projectile

Length: 446mm Diameter: 127mm

Country of origin: USSR



M3A1 Propellant Charge

Diameter: ~127mm Length: ~406mm

Note: This charge is made up of multiple smaller charges. Country of origin: USA





M203A1 Propellant Charge

Diameter: ~159mm Length: ~768mm

Country of origin: USA





M232 Propellant Charge

Diameter: 152mm Length: ~156mm Country of origin: USA

Pyrotechnic devices include signal and smoke devices.



RB-50S (red signal)

Diameter: 50mm Length: 287mm

Country of origin: russia





<u>DM-11</u> (smoke)

Diameter: 156mm Height: 97mm

Note: Comes with and without a handle.

Country of origin: USSR





<u>UDSh</u> (smoke)

Diameter: 318mm Height: 139mm Country of origin:

USSR





UDSh-U (smoke)

Diameter: ~325mm Height with transport cover: not more than

155mm

Country of origin: Ukraine





Ground Signaling Cartridge "NSP" (colored light)

Diameter: 37mm Length: 100mm

Note: Three different variants produce either red,

green, or yellow light. Country of origin: USSR



PPR-50 (chaff)

Height: 200mm Diameter: 50mm Country of origin: russia/USSR



<u>L221</u> (infrared flare)

Height: 200mm Diameter: 50mm Country of origin: russia/USSR



3D6/3D6M (smoke)

Height: 220mm Diameter: 81mm

Country of origin: russia



Handheld Lighting and Signaling Cartridges

Diameter: 30mm Length: 225mm

Country of origin: USSR/russia



<u>L8A1</u>

(smoke / red phosphorus)

Diameter: 66mm Height: 185mm Country of origin:

JK









M4A2

(smoke) Diameter: 305mm Height: 330mm

Country of origin: USA







L376-2 "Yagel"

(decoy)

Height: **INFORMATION**

NEEDED

Caliber: 50mm

Diameter: **INFORMATION**

NEEDED

Country of origin:

ussia



When compared to other ammunition "miscellaneous" items do not fall into other ammunition categories.



Thermal Battery for 9K32 "Strela-2"

Diameter: **INFORMATION NEEDED**Length: **INFORMATION NEEDED**Note: Heats up to a high temperature

when activated.

Country of origin: USSR



Thermal Battery for 9K38 and 9K310 "Igla" and "Igla-1"

Diameter: INFORMATION NEEDED Length: INFORMATION NEEDED

Country of origin: USSR





Battery Coolant Unit for FIM-92 Stinger

Diameter: ~86mm Length: 95mm

Country of origin: USA

FIM-92 Stinger





9B899 Decoy

Body Diameter: 68mm

Diameter of Orange Tail Section:

108mm

Length (without nose cap):

430mm

Country of origin: USSR

Iskander and Iskander-M







Diameter: INFORMATION NEEDED
Length: INFORMATION NEEDED

Country of origin: USA

FIM-92 Stinger







<u>Launch Motor for 9K111 "Fagot"</u> (HATO: AT-4ASpigot)

Diameter: ~120mm

Length: INFORMATION NEEDED

Note: Can be black or green. Country of origin: USSR







Launch Motor for 9M113 Konkurs

Diameter of body: 110mm Total length: 286mm Length of body: 205mm Note: Can be black or green. Country of origin: russia

9M113 Konkurs



Launch Motor for 9M120F Ataka

Diameter: 130mm Length: 190mm Country of origin: russia 9M120F Ataka





Launch Motor for RPO-A

Diameter: 90mm Length: 210mm

Country of origin: russia

RPO-A



90mm PD



Length: INFORMATION NEEDED

Country of origin: Ukraine









Launch motors for fixed-wing drones

Dimensions: Varies

Note: These rocket motors are used to provide the initial thrust for some types of fixed-wing drones during takeoff. They may or may not be found attached to the drone.

Country of origin: Ukraine







Pressurized gas vessels

Dimensions: Varies

Note: Many guided missiles contain these gas vessels; their purpose is to power the movement of aerodynamic surfaces, cool electronics, and various other functions. Handle them with care if it is unclear whether or not they are still pressurized!











Contact Cover for 122mm Rockets

Body Diameter: ~127mm Diameter of Cap: 71mm Length with Cap: 110mm Country of origin: russia

122mm "Grad"









NATO Lifting Plug for Artillery <u>Projectiles</u>

Dimensions: Varies

Note: Plugs do not contain explosives themselves, and are replaced with a fuze prior to the projectile being fired.

Country of origin: NATO









Modular Reactive Armor KhSChKV-19

Width: 125mm Length: 250mm Height: 24mm

Country of origin: Ukraine



Modular Reactive Armor KhSChKV-34

Width: 125mm Length: 250mm Height: 36mm

Country of origin: Ukraine





4S20 Reactive Armor Panel

Width: 130mm Length: 255mm

Note: There are usually 2 pieces in a metal case. Country of origin: USSR



Reactive Armor Box (model unk)

Width: 137mm Length: 312mm

Note: Contains 2 4S20 reactive panels.

Country of origin: USSR





ML-5 (incendiary)

Length: 41mm Thickness: 22mm Country of origin: USSR

122mm MLRS







GE30M (incendiary)

Diameter: 30mm Height: 29.7mm

Note: Used in the warheads of some Kh-series missile and Shahed-2 warheads. Country of origin: russia







Supplementary charges (HE)

Diameter: ~46mm Length: 63mm

Note: These are installed in the fuze wells of some NATO artillery projectiles; they are removed when

fuzes with extra-long boosters are used.

Country of origin: USA







External fuel tanks

Dimensions: Varies

Note: These are fuel tanks mounted on the outsides of fixed- and rotary-winged aircraft, designed to increase the aircrafts' range. Some are designed to be ejected from the aircraft in an emergency or when they are empty; these may have explosive cartridges attached.















Grenade Discharge Cup for AK
Country of origin: USSR/russia