YEARS of the Company

Product Catalog

1948

Sloboda 75

2023

Čačak, the city where headquarters of company "Sloboda" were established, is located 140 kilometers away from Belgrade.

The city of Čačak made its home in the charming valley of the West Morava river, at the crossroads between Šumadija and Pomoravlje, bordered by the mountains Jelica, Ovčar, Kablar and Vujan.

Alongside the industrial development, Čačak also shaped as a cultural, educational, scientific, medical and spiritual center of the region.

The historical events that did not have mercy on the town couldn't diminish the incessant aspirations for improvement, material and spiritual growth, but at the same time, a quiet daily life of its citizens.

Ever since the foundation of the Company "Sloboda" up to now, the history of Čačak and "Sloboda" intertwined.

They shared the good and the bad times, both trying to develop and build a better place for working and living for its people, mutually helping each other, knowing that together was the only way they could succeed.

"Sloboda" Company Čačak was founded by a government decision of the Federal Republic of Yugoslavia on July 10, 1948.

The adopted day of work commencement is October 6, 1948 and the official production starts in November 1949.

From the simple production at the time, "Sloboda" has grown into a modern company that now produces new generation ammunition.

In contrast to the simple production formerly done on old lathes, nowadays, the company's experts, thanks to their knowledge and experience already proven on the foreign markets, are able to offer services ranging from engineering, purchases, equipment installation, creating construction and technological documentation according to clients' requirements.

"Sloboda" possesses modern production equipment, quality professional staff in all phases of planning, manufacturing and development.

There are highly equipped laboratories and test centres in the company.

"Sloboda" is a well-known and established name on the global market that was and has remained an equivalent for quality of products and services and overall business efficiency.

The company "Sloboda" has QMS (Quality Management System) certificate ISO 9001-2015.

75

Production program of "Sloboda" Company**:**

- Antiaircraft ammunition cal. 20/23/30/37/40/57 mm
- Aircraft ammunition cal. 23 mm, 30 mm and 40 mm
- Ammunition for automatic grenade launcher 30 mm
- Amm. 40 mm for UBG launcher 40 mm type GP-25 and GP-30
- Amm. 40 mm x 46 for grenade launcher M79, M203 and others
- Signal ammunition 26 mm and 38 mm
- Special police program (amm. 26.5/38 mm and grenades)
- Rifle grenades cal. 30/40/60 mm (with and without bullet trap)
- Rocket antiarmour weapon cal. 64 mm, 90 mm and 120 mm
- Artillery/tank amm. 76/100/105/122/125/130/152/155 mm
- Fuzes for our ammunition and for ammunition overhauling
- Proximity fuzes and time fuzes
- Gun primers for our ammunition and for amm. overhauling
- Practice ammunition
- Production of special tools and control tools
- Production of pyrotechnical compositions (delay and timed)
- Manufacture of wooden and plastics packaging

"Sloboda" Company is well known and renowned on the world market and still is the synonym of ammunition quality of its production program.

Production of company "Sloboda" is in harmony with both tradition and modern-day requirements.

Technological processes:

- Cold forming
- Metal molding
- Casting
- Forging
- Heat treatment
- Galvanic protection
- Chemical protection
- Lacquering
- Production and processing of pyrotechnical compounds
- Wood processing
- Water Jet technologies

Some of these technologies have highly modern technological methods (in the area of *cold forming* and *metal molding*).

In the ensuring period, the company "Sloboda" will use its technological and human resources in an attempt to preserve its development and production, for the benefit of both its employees and the broader community.

A wide and quality offer of newly developed products and various types of processing technologies is the real reference for a breakthrough to the demanding global market where, thanks to its quality and professionalism, **Company "Sloboda" has been a recognizable name for 75 years already.**

CONTENTS - INFANTRY RESOURCES

CONTENTS - ANTIAIRCRAFT RESOURCES

CONTENTS - ARTILLERY RESOURCES

Sloboda

AMMUNITION 30 mm

(for AGL-30 mm, BGA-30 mm, AGS-17, KBA-117 or other similar weapons)

ROUND 30 mm HE M93 P1

The round 30 mm HE M93 P1 is designated for action from automatic grenade launcher on targets on the ground out of shelters and in shelters at distances up to 1700 m.

Calibre (mm)	30
Round mass (g)	360
Grenade mass (g)	273
Round length (mm)	132
Muzzle velocity (m/s)	185
Rate of fire (rounds/min.)	min 350
Precision on vertical target, at the distance of 100 m (m)	$V_p \leq 0.08$, $V_v \leq 0.08$
Max range (m)	1700
Lethal radius (m)	6
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 30 mm

(for AGL-30 mm, BGA-30 mm, AGS-17, KBA-117 or other similar weapons)

ROUND 30 mm TP M93 P1

The round 30 mm TP M93 P1 is intended for personnel training for use of 30 mm automatic grenade launcher M93 as well as 30 mm grenade launcher AGS-17 at distances up to 1700 m.

Calibre (mm)	30
Round mass (g)	360
Grenade mass (g)	273
Round length (mm)	132
Muzzle velocity (m/s)	185
Precision on vertical target, at the distance of 100 m (m)	$V_p \leq 0.08$, $V_v \leq 0.08$
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

AMMUNITION 30 mm

(for AGL-30 mm, BGA-30 mm, AGS-17, KBA-117 or other similar weapons)

ROUND 30 mm PM M93 P1

The round 30 mm PM M93 P1 (Practice Marking) is intended for personnel training for use of 30 mm automatic grenade launcher.

It can be used from 30 mm automatic grenade launcher M93 as well as 30 mm grenade launcher AGS-17 at distances up to 1700 m.

Calibre (mm)	30
Round mass (g)	360
Grenade mass (g)	273
Round length (mm)	132
Muzzle velocity (m/s)	185
Precision on vertical target, at the distance of 100 m (m)	$V_p \leq 0.08$, $V_v \leq 0.08$
Max range (m)	1700
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 HE-SD M99 P1

The round 40 mm x 46 HE-SD M99 P1 is designated for firing from the grenade launcher 40 mm of NATO system of low velocity (LV) aiming at targets on the ground out of shelters and in shelters at utility range from 50 m to 400 m.

Calibre (mm)	40
Round mass (g)	245
Grenade mass (g)	192
Explosive mass (g)	48
Round length (mm)	104.5
Muzzle velocity (m/s)	76
Fuze arming distance (m)	8 ÷ 30
Fuze self-destruct time (s)	12 ÷ 20
Precision on vertical target, at the distance of 100 m (m)	$V_p \leq 0.25$, $V_v \leq 0.35$
Max range (m)	400
Lethal radius (m)	≥ 5
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 HE-SD M14

The round 40 mm x 46 HE-SD M14 is designated for firing from the grenade launcher 40 mm of NATO system of low velocity (LV) aiming at targets on the ground out of shelters and in shelters at utility range from 50 m to 400 m.

Calibre (mm)	40
Round mass (g)	237
Grenade mass (g)	186
Muzzle velocity (m/s)	78
Fuze arming distance (m)	8 ÷ 30
Fuze self-destruct time (s)	12 ÷ 20
Max range (m)	400
Lethal radius (m)	≥ 5
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 HE M99

The round 40 mm x 46 HE M99 is designated for firing from the grenade launcher 40 mm of NATO system of low velocity (LV) aiming at targets on the ground out of shelters and in shelters at utility range from 50 m to 400 m.

Calibre (mm)	40
Round mass (g)	245
Grenade mass (g)	192
Muzzle velocity (m/s)	78
Fuze arming distance (m)	14 ÷ 27
Max range (m)	400
Lethal radius (m)	≥ 5
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 HE M17

The round 40 mm x 46 HE M17 is designated for firing from the grenade launcher 40 mm of NATO system of low velocity (LV) aiming at targets on the ground out of shelters and in shelters at utility range from 50 m to 400 m.

Calibre (mm)	40
Round mass (g)	240
Grenade mass (g)	188
Muzzle velocity (m/s)	78
Fuze arming distance (m)	14 ÷ 27
Max range (m)	400
Lethal radius (m)	≥ 5
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 HEDP M99

The round 40 mm x 46 HEDP M99 is intended for firing from grenade launcher 40 mm of NATO system of low velocity.

It is used against humans, light armored vehicles and technical and material means.

Calibre (mm)	40
Round mass (g)	252
Grenade mass (g)	200
Explosive mass (g)	42
Round length (mm)	max 106.5
Muzzle velocity (m/s)	78
Fuze arming distance (m)	8 ÷ 30
Precision on vertical target, at the distance of 100 m (m)	$V_p \leq 0.25$, $V_v \leq 0.35$
Max range (m)	400
Penetration (mm of steel plate)	60
Lethal radius (m)	≥ 5
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 HEDP M99 P1

The round 40 mm x 46 HEDP M99 P1 is intended for firing from grenade launcher 40 mm of NATO system of low velocity.

It is used against humans, light armored vehicles and technical and material means.

Calibre (mm)	40
Round mass (g)	252
Grenade mass (g)	200
Explosive mass (g)	45
Round length (mm)	max 106.5
Muzzle velocity (m/s)	78
Fuze arming distance (m)	8 ÷ 30
Precision on vertical target, at the distance of 100 m (m)	$V_p \leq 0.25$, $V_v \leq 0.35$
Max range (m)	400
Penetration (mm of steel plate)	60
Lethal radius (m)	≥ 5
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000, VHS-BG or other similar weapons)

ROUND 40 mm x 46 HEDP-SD M11

The round 40 mm x 46 HEDP-SD M11 is intended for firing from grenade launcher 40 mm of NATO system of low velocity.

It is used against humans, light armored vehicles and technical and material means.

Calibre (mm)	40
Round mass (g)	260
Grenade mass (g)	208
Muzzle velocity (m/s)	78
Fuze arming distance (m)	8 ÷ 30
Fuze self-destruction time (s)	12 ÷ 20
Max range (m)	400
Penetration (mm of steel plate)	60
Lethal radius (m)	≥ 5
Operating temperature (°C)	-46 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000, VHS-BG or other similar weapons)

ROUND 40 mm x 46 HEDP-SD M17

The round 40 mm x 46 HEDP-SD M17 is intended for firing from grenade launcher 40 mm of NATO system of low velocity.

It is used against humans, light armored vehicles and technical and material means.

Calibre (mm)	40
Round mass (g)	250
Grenade mass (g)	198
Muzzle velocity (m/s)	78
Fuze arming distance (m)	8 ÷ 30
Fuze self-destruction time (s)	12 ÷ 20
Max range (m)	400
Penetration (mm of steel plate)	60
Lethal radius (m)	≥ 5
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000, M148, MSGL40, CZ 805 G1, CIS 40 GL or other similar weapons)

ROUND 40 mm x 46 PRACTICE M99

The round 40 mm x 46 practice M99 is designated for determination of precision of weapon and training and definition of process of firing for grenade launcher 40 mm of NATO system of low velocity (LV) at utility range from 50 m to 400 m.

Calibre (mm)	40
Round mass (g)	245
Grenade mass (g)	192
Round length (mm)	max 104.5
Muzzle velocity (m/s)	78
Precision on vertical target at the distance of 100 m (m)	$V_p \leq 0.25$, $V_v \leq 0.35$
Max range (m)	400
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 TPSFM M04

The round 40 mm x 46 TPSFM M04 (Training Practice, Sound, Flash and Marking Round) is designated for personnel training for use of grenade launcher 40 mm of NATO system of low velocity (LV) at distances up to 400 m.

Calibre (mm)	40
Round mass (g)	233
Grenade mass (g)	181
Round length (mm)	104
Smoke type	white
Bursting sound upon impact (dB)	80
Muzzle velocity (m/s)	78
Fuze arming distance (m)	8 ÷ 30
Precision on vertical target at the distance of 100 m (m)	$V_p \leq 0.25$, $V_v \leq 0.35$
Max range (m)	400
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 SMOKE M99

The round 40 mm x 46 smoke M99 is intended for firing from grenade launcher 40 mm of NATO system of low velocity, for creating of smoke screens and smoking of different terrains at distances up to 400 m.

Calibre (mm)	40
Round mass (g)	236
Grenade mass (g)	186
Round length (mm)	106
Delay time (s)	2 ÷ 4
Smoke time (s)	30
Muzzle velocity (m/s)	76
Firing range (m)	50 ÷ 400
Smoke type	white
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 SMOKE COLORED M99

The round 40 mm x 46 smoke colored M99 is intended for firing from grenade launcher 40 mm of NATO system of low velocity, for creating the smoke screens, for distributing smoke on the various terrains and for signaling.

Calibre (mm)	40
Round mass (g)	210
Grenade mass (g)	158
Round length (mm)	106
Delay time (s)	2 ÷ 4
Smoke time (s)	20
Muzzle velocity (m/s)	76
Firing range (m)	50 ÷ 400
Smoke type	green, red, yellow, orange
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 SMOKE CS M99

The round 40 mm x 46 smoke CS M99 is intended for firing from grenade launcher 40 mm of NATO system of low velocity.

It is used by special forces of the Army and the police, for anti-terrorist actions, as well as for preventing and disabling any riots at the range from 50 m up to 400 m.

Calibre (mm)	40
Round mass (g)	210
Grenade mass (g)	158
Round length (mm)	106
Delay time (s)	2 ÷ 4
Smoke time (s)	20
Muzzle velocity (m/s)	76
Firing range (m)	50 ÷ 400
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 THREE PART SMOKE CS M11

The round 40 mm x 46 three part smoke CS M11 is intended for firing from grenade launcher 40 mm of NATO system of low velocity.

It is used by special forces of the Army and the police, for anti-terrorist actions, as well as for preventing and disabling any riots.

Calibre (mm)	40
Round mass (g)	200
Grenade mass (g)	155
Round length (mm)	110
Delay time (s)	1 ÷ 1.5
Smoke time (s)	20
Smoke part (pcs)	3
Firing range (m)	50 ÷ 150
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 S&F M01 WITH IMPACT FUZE

The round 40 mm x 46 S&F M01 with impact fuze is intended for firing from grenade launcher 40 mm of NATO system of low velocity.

It is used by special forces of the Army and the police for anti-terrorist actions, as well as for preventing and disabling any riots in the open or in closed spaces.

Calibre (mm)	40
Round mass (g)	235
Grenade mass (g)	185
Round length (mm)	111
Sound intensity (dB)	120
Fuze arming distance (m)	8 ÷ 35
Muzzle velocity (m/s)	78
Firing range (m)	50 ÷ 400
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 S&F M99 WITH DELAY

The round 40 mm x 46 S&F M99 with delay is intended for firing from grenade launcher 40 mm of NATO system of low velocity.

It is used by special forces of the Army and the police for anti-terrorist actions, as well as for preventing and disabling any riots.

Calibre (mm)	40
Round mass (g)	115
Grenade mass (g)	72
Round length (mm)	87
Delay time (s)	1 ÷ 1.5
Sound intensity (dB)	120
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm x 46

(for M203, M79, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 ILLUMINATING WITH PARACHUTE M04

The round 40 mm x 46 illuminating with parachute M04 is intended for firing from grenade launcher 40 mm of low velocity, for illuminating of terrain in night conditions and conditions of low visability.

Calibre (mm)	40
Round mass (g)	250
Grenade mass (g)	200
Round length (mm)	134
Delay time (s)	2.5 ÷ 3.5
Burning time of star (s)	20
Light intensity of star (cd)	80000
Middle wave length (nm)	587±5
Height fired at 85° (m)	182±30
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 40 mm x 46

(for M203, M79, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 THERMOBARIC M18

The round 40 mm x 46 thermobaric M18 is used for destruction of human targets inside shelters and open areas, as well as for the destruction of light armoured and non-armoured vehicles, acting with high temperature and a shock wave.

Calibre (mm)	40
Round mass (g)	210
Grenade mass (g)	160
Epicenter temperature (°C)	1500
Overpressure at 1 m distance (bars)	1
Open zone of destruction (m^2)	2
Closed zone of destruction (m^3)	4
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 IMPULSE M13 P1

The round 40 mm x 46 impulse M13 P1 is intended for firing from 40 mm grenade launcher of NATO system of low velocities at ranges from 20 m up to 50 m in order to suppress and prevent various types of riots and street protests.

Calibre (mm)	40
Round mass (g)	102
Grenade mass (g)	52
Round length (mm)	max 109
Firing range (m)	20 ÷ 50
Precision on vertical target at the distance of 20 m (m)	$V_p \leq 0.1$, $V_v \leq 0.1$
Kinetic energy at the distance of 20 m (J)	≈ 120
Operating temperature (°C)	-30 ÷ +40

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 WITH RUBBER BALLS

The round 40 mm x 46 with rubber balls is to be used for anti-riot control.

Calibre (mm)	40
Round mass (g)	145
Round length (mm)	122.5
Number of rubber balls	24
Ball diameter (mm)	15
Hagomess of rubber (Shore)	80
Precision on vertical waved paper target, at the distance of 25 m	min 15 balls in target
Operating temperature (°C)	-42 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000 or other similar weapons)

ROUND 40 mm x 46 TP M07 (WITH ORANGE DYE)

The round 40 mm x 46 TP M07, training-marking round with orange powder, is intended for training and determining of firing procedures for 40 mm x 46 grenade launchers LV.

Marking powder from the cap-assembly, which breaks when hitting a target or the ground, marks the hit location.

Calibre (mm)	40
Round mass (g)	230
Grenade mass (g)	180
Round length (mm)	max 103
Muzzle velocity (m/s)	78
Precision on vertical target at the distance of 100 m (m)	$V_p \leq 0.25$, $V_v \leq 0.35$
Max range (m)	400
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

AMMUNITION 40 mm x 46

(for M203, M79, MGL MK1, HK69A1, F2000, FN LG1, CIS 40 GL or other similar weapons)

ROUND 40 mm x 46 TP-T M18 (WITH ORANGE DYE)

The round 40 mm x 46 TP-T M18 (with orange dye), training-practice round with tracer and with orange powder, is intended for training and determining of firing procedures for 40 mm x 46 grenade launchers LV.

Marking powder from the cap-assembly, which breaks when hitting a target or the ground, marks the hit location.

Calibre (mm)	40
Round mass (g)	235
Grenade mass (g)	185
Round length (mm)	103
Muzzle velocity (m/s)	78
Tracer time (s)	4
Max range (m)	400
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm

(for under barrel grenade launchers 40 mm GP-25 and GP-30, BGP-40)

ROUND 40 mm HE M03

The round 40 mm HE M03 is intended for firing from 40 mm underbarrel grenade launcher GP-25 and GP-30.

It is used against humans and technical and material means.

Calibre (mm)	40
Round mass (g)	225
Explosive mass (g)	48
Round length (mm)	106
Muzzle velocity (m/s)	78
Max range (m)	400
Lethal radius (m)	6
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

AMMUNITION 40 mm

(for under barrel grenade launchers 40 mm GP-25 and GP-30, BGP-40)

ROUND 40 mm HE-SD M06 P1

The round 40 mm HE-SD M06 P1 (with fragmentation effect) is used against ground targets, mainly against sheltered and unsheltered troops.

The ammunition is intended for firing from 40 mm underbarrel grenade launcher GP-25 KASTYOR and GP-30.

Calibre (mm)	40
Round mass (g)	240
Round length (mm)	97
Muzzle velocity (m/s)	78
Max range (m)	400
Lethal radius (m)	> 6
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm

(for under barrel grenade launchers 40 mm GP-25 and GP-30, BGP-40)

ROUND 40 mm HE BOUNDING M12

The round 40 mm HE bounding M12 is intended for firing from 40 mm underbarrel grenade launcher GP-25 and GP-30.

It is used against humans and technical and material means.

The function is obtained by bouncing and explosion in the air, which increase the efficiency of the shell fragments.

Calibre (mm)	40
Round mass (g)	276
Explosive mass (g)	40
Round length (mm)	max 108.3
Muzzle velocity (m/s)	78
Fuze arming distance (m)	10 ÷ 40
Fuze self-destruct time (s)	12 ÷ 20
Max range (m)	400
Lethal radius (m)	6
Special characteristics (m)	jump height min 0.5
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

AMMUNITION 40 mm

(for under barrel grenade launchers 40 mm GP-25 and GP-30, BGP-40)

ROUND 40 mm HEDP M04

The round 40 mm HEDP M04 is intended for firing from 40 mm underbarrel grenade launcher GP-25 and GP-30.

It is used against humans, light armored vehicles and technical and material means.

Calibre (mm)	40
Round mass (g)	230
Round length (mm)	max 102
Muzzle velocity (m/s)	78
Penetration (mm of steel plate)	60
Max range (m)	400
Lethal radius (m)	≥ 5
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm

(for under barrel grenade launchers 40 mm GP-25 and GP-30, BGP-40)

ROUND 40 mm PRACTICE M03

The round 40 mm practice M03 is intended for personnel training for use of 40 mm underbarrel grenade launcher BGP as well as 40 mm underbarrel launcher KASTYOR type.

Calibre (mm)	40
Round mass (g)	230
Round length (mm)	106
Muzzle velocity (m/s)	78
Max range (m)	400
Precision on vertical target, at the distance of 100 m (m)	$V_p \leq 0.5$, $V_v \leq 0.5$
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 40 mm

(for under barrel grenade launchers 40 mm GP-25 and GP-30, BGP-40)

ROUND 40 mm SMOKE M04

The round 40 mm smoke M04 is intended for firing from grenade launcher 40 mm GP-25, for creating of smoke screens and smoking of different terrains at distances up to 400 m.

Calibre (mm)	40
Round mass (g)	232
Round length (mm)	110
Delay time (s)	3 ÷ 6
Smoke time (s)	30
Muzzle velocity (m/s)	76
Firing range (m)	50 ÷ 400
Smoke type	white, red, green, yellow
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm

(for under barrel grenade launchers 40 mm GP-25 and GP-30, BGP-40)

ROUND 40 mm ILLUMINATING WITH PARACHUTE M04

The round 40 mm illuminating with parachute M04 is intended for firing from grenade launcher 40 mm GP-25, for illuminating of terrain in night conditions and conditions of low visability.

Calibre (mm)	40
Round mass (g)	215
Round length (mm)	124
Delay time (s)	2.5 ÷ 3.5
Burning time of star (s)	20
Light intensity of star (cd)	80000
Middle wave length (nm)	587±5
Height fired at 85° (m)	182±30
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

AMMUNITION 40 mm

(for under barrel grenade launchers 40 mm GP-25 and GP-30, BGP-40, GP-34)

ROUND 40 mm STUN&FLASH M12

The round 40 mm stun&flash M12 is intended for using by special forces of the Army and the police, for anti-terrorist actions, as well as for preventing and disabling any riots in the open or in closed spaces.

Calibre (mm)	40
Round mass (g)	max 250
Round length (mm)	max 134
Active substance (g)	60
Light intensity (1000000 cd)	15±5
Delay time (s)	min 3
Muzzle velocity (m/s)	76
Firing range (m)	min 100
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

RIFLE GRENADES 30 mm

(for semi-automatic rifles 7.62 mm, automatic rifles 5.56 mm and 7.62 mm or similar weapons with grenade attachment)

RIFLE GRENADE HE M99 WITH BULLET TRAP

The rifle grenade HE M99 with bullet trap is intended for the neutralization and destruction of enemy personnel and non-armoured fire means.

Calibre (mm)	30
Grenade mass (g)	550
Length (mm)	315
Muzzle velocity / 5.56 mm x 45 - SS 109 (m/s)	58
Muzzle velocity / 7.62 mm x 51 (m/s)	72
Max range / 5.56 mm x 45 - SS 109 (m)	300
Max range / 7.62 mm x 51 (m)	400
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

RIFLE GRENADES 30 mm

(for semi-automatic rifles 7.62 mm, automatic rifles 5.56 mm and 7.62 mm or similar weapons with grenade attachment)

RIFLE GRENADE TP M99 WITH BULLET TRAP

The rifle grenade TP M99 with bullet trap is intended for training of gunner in proper handling and firing.

Calibre (mm)	30
Grenade mass (g)	550
Length (mm)	315
Muzzle velocity / 5.56 mm x 45 - SS 109 (m/s)	58
Muzzle velocity / 7.62 mm x 51 (m/s)	72
Max range / 5.56 mm x 45 - SS 109 (m)	300
Max range / 7.62 mm x 51 (m)	400
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

RIFLE GRENADES 30 mm

(for semi-automatic rifles 7.62 mm, automatic rifles 5.56 mm and 7.62 mm or similar weapons with grenade attachment)

RIFLE GRENADE HE M60 P1

The rifle grenade HE M60 P1 without bullet trap is used for the neutralization and destruction of non-protected enemy personnel and fire means.

Calibre (mm)	30
Grenade mass (g)	520
Length (mm)	307
Muzzle velocity / grenade cartridge 7.62 mm (m/s)	67
Max range / grenade cartridge 7.62 mm (m)	400
Accuracy at the distance of 200 m (m)	$H_{max} - H_{min}$ = 15 (range in direction 3 m)
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

RIFLE GRENADES 40 mm

(for semi-automatic rifles 7.62 mm, automatic rifles 5.56 mm and 7.62 mm or similar weapons with grenade attachment)

RIFLE GRENADE HE M03 WITH BULLET TRAP

The rifle grenade HE M03 with bullet trap is intended for the neutralization and destruction of enemy personnel and non-armoured fire means.

Calibre (mm)	40
Grenade mass (g)	450
Length (mm)	275
Muzzle velocity / 5.56 mm x 45 - SS 109 (m/s)	58
Muzzle velocity / 7.62 mm x 51 (m/s)	72
Max range / 5.56 mm x 45 - SS 109 (m)	300
Max range / 7.62 mm x 51 (m)	400
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

RIFLE GRENADES 40 mm

(for semi-automatic rifles 7.62 mm, automatic rifles 5.56 mm and 7.62 mm or similar weapons with grenade attachment)

RIFLE GRENADE SMOKE M62

The rifle grenade smoke M62 is intended for smoke screening effects, blinding enemy and fire weapons, signaling, spotting of targets and camouflage of own troops.

Calibre (mm)	40
Grenade mass (g)	475
Length (mm)	330
Muzzle velocity / grenade cartridge 7.62 mm (m/s)	70
Max range / grenade cartridge 7.62 mm (m)	350
Delay time (s)	7.5
Smoke time (s)	80
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

RIFLE GRENADES 40 mm

(for semi-automatic rifles 7.62 mm, automatic rifles 5.56 mm and 7.62 mm or similar weapons with grenade attachment)

RIFLE GRENADE SMOKE M04 WITH BULLET TRAP

The rifle grenade smoke M04 with bullet trap is intended for smoke screening effects, blinding of the enemy, signaling, spotting of targets and camouflage of the own troops.

Calibre (mm)	40
Grenade mass (g)	580
Length (mm)	370
Muzzle velocity / 5.56 mm x 45 - SS 109 (m/s)	56
Muzzle velocity / 7.62 mm x 51 (m/s)	68
Max range / 5.56 mm x 45 - SS 109 (m)	250
Max range / 7.62 mm x 51 (m)	380
Delay time (s)	7.5
Smoke time (s)	80
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

RIFLE GRENADES 40 mm

(for semi-automatic rifles 7.62 mm, automatic rifles 5.56 mm and 7.62 mm or similar weapons with grenade attachment)

RIFLE GRENADE ILLUMINATING M62

The rifle grenade illuminating M62 is intended for illuminating of battle area for detection of enemy troops, spotting of targets, observing own firing results with another ammunition, correction of firing and disturbing of enemy.

Calibre (mm)	40
Grenade mass (g)	400
Length (mm)	330
Range of parachute opening at firing at elevation of 45° (m)	250
Delay time (s)	4.3 ÷ 5.1
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

RIFLE GRENADES 40 mm

(for semi-automatic rifles 7.62 mm, automatic rifles 5.56 mm and 7.62 mm or similar weapons with grenade attachment)

RIFLE GRENADE ILLUMINATING M08 WITH BULLET TRAP

The rifle grenade illuminating M08 with bullet trap is intended for illuminating of battle area for detection of enemy troops, spotting of targets, observing own firing results with another ammunition, correction of firing and disturbing of enemy.

Calibre (mm)	40
Grenade mass (g)	500
Length (mm)	370
Range of parachute opening at firing at elevation of 45° (m)	250
Delay time (s)	4.3 ÷ 5.1
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

RIFLE GRENADES 60 mm

(for semi-automatic rifles 7.62 mm, automatic rifles 5.56 mm and 7.62 mm or similar weapons with grenade attachment)

RIFLE GRENADE ANTITANK M60 P1

The rifle grenade antitank M60 P1 is intended for destroying tanks and armored vehicles, fortified military objects made of concrete, steel, wood and earth, and enemy personnel in shelters.

Calibre (mm)	60
Grenade mass (g)	610
Length (mm)	390
Muzzle velocity / grenade cartridge 7.62 mm (m/s)	61
Max range / grenade cartridge 7.62 mm (m)	330
Accuracy at the distance of 100 m (m)	H + L = 1.75
Penetration of homogeneous armour plate (mm)	200
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

ROCKETS 57 mm

(for Bofors 57 mm L/70)

ILLUMINATING ROCKET 57 mm M17

The illuminating rocket 57 mm M17 is designed and manufactured to be fired from both 57 mm straight and helical rocket launchers made by Bofors AB (Sweden).

In composition of rocket are parachute and flare section, time delay unit and rocket motor.

The rocket is designed to illuminate the field in case of combat operations, surveilance and identification of vessels during the coastal patrol.

Calibre (mm)	57
Mass (kg)	3.9
Length (mm)	1064
Muzzle velocity (m/s)	450
Propellant mass (kg)	0.97
Rocket engine operation time (s)	1.5
Functioning time of delay element (s)	25±2
Luminous intensity (cd)	300000
Burning time of flare (s)	min 70
Max range (m)	5500±500
Ignition	electrical
Operating temperature (°C)	0 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

ROCKET WEAPON 64 mm

HAND-HELD ROCKET LAUNCHER 64 mm RBR M80

The hand-held rocket launcher 64 mm RBR M80 is intended for action against light armoured transport vehicles, trucks and infantry fighting vehicles of diffrent types.

It consists of launcher, rocket with shaped charge warhead and piezoelectric fuze.

The launcher is light weighted and intended for single-shot use.

Calibre (mm)	64
Type	HEAT
Carry length (mm)	860
Firing length (mm)	1200
Mass (kg)	3
Muzzle velocity (m/s)	187
Max range (m)	1280
Effective range (m)	200
Penetration of homogeneous armour plate (mm)	≥ 300
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

ROCKET WEAPON 90 mm

HAND-HELD ROCKET LAUNCHER 90 mm RBR M79A

The hand-held rocket launcher 90 mm RBR M79A is intended for action against armoured vehicles and fortified structures.

It consists of launcher, rocket with shaped charge warhead and piezoelectric fuze.

Launcher is intended for multiple-shot use and equipped with triggering mechanism and optical sight device.

Calibre (mm)	90
Type	HEAT
Mass of container with rocket (kg)	5.2
Muzzle velocity (m/s)	245
Max range (m)	1960
Effective range (m)	350
Penetration of homogeneous armour plate (mm)	≥ 400
Operating temperature (°C)	-30 ÷ +40

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

ROCKET WEAPON 120 mm

HAND-HELD ROCKET LAUNCHER 120 mm RBR M91

The hand-held rocket launcher 120 mm RBR M91 is intended for action modern tanks and armored targets of fortified structures and infantry fighting vehicles of different types.

It consists of launcher, rocket with shaped charge warhead and piezoelectric fuze.

The rocket is transported in the launcher, so the transition from marching to combat position is simple and quick.

Calibre (mm)	120
Type	HEAT
Mass of launcher with rocket (kg)	13
Muzzle velocity (m/s)	205
Max range (m)	1960
Effective range (m)	250
Penetration of homogeneous armour plate (mm)	≥ 700
Operating temperature (°C)	-30 ÷ +45

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

ERO ELEMENTS

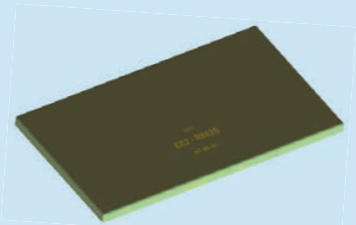
FLAT EXPLOSIVE ELEMENT EE1-R333S

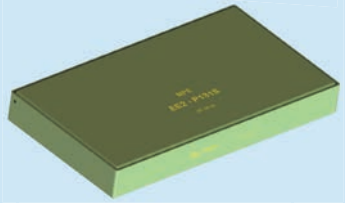
The flat exsplosive element EE1-R333S acts as additional protection for the flank of the tank turret.

It was designed to protect the tank from rocket (shaped charge) projectiles with a penetration capacity up to 300 mm.

Overall dimensions (mm)	250 x 130 x 13
Mass (kg)	1.85
Explosive type	PBX
Operating temperature (°C)	+30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.





75

ERO ELEMENTS

FLAT EXPLOSIVE ELEMENT EE2-R662S AND PROFILED EXPLOSIVE ELEMENT EE2-P131S

The flat explosive element EE2-R662S and the profiled exsplosive element EE2-P131S act as additional protection for the frontal part of the tank turret and the frontal part of the tank body.

The explosive elements are designed to protect the tank from rocket (shaped charge) projectiles with a penetration capacity up to 950 mm and tank (shaped charge and sabot) ammunition with a penetration capacity up to 550 mm.

EE2-R662S	Overall dimensions (mm)	371 x 206 x 15
	Mass (kg)	7.3
	Explosive type	PBX
	Operating temperature (°C)	+30 ÷ +50
EE2-P131S	Overall dimensions (mm)	371 x 206 x 48
	Mass (kg)	8.1
	Explosive type	PBX
	Operating temperature (°C)	+30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

MINES 120 mm

EBT 120 mm M18

The EBT 120 mm M18 is the HE projectile for destruction of different targets on the ground. It consists of body with high explosive, stabilizer and special fuze UT M18.

Calibre (mm)	120
Type	HE SHELL
Mass (kg)	13
Length with fuze (mm)	675
Muzzle velocity (m/s)	320
Max range (m)	5500±500
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

WARHEADS 130 mm

HE FRAGMENTATION WARHEAD 130 mm M1

The HE fragmentation warhead 130 mm M1 is an explosive lethal device primarily intended for effective action against enemy targets.

It is used as an explosive device for equipping an unmanned aircraft.

This lethal device consists of assembly of warhead with fragmentation envelope made of steel balls of a diameter of 6 mm and safety-arming mechanism M17SP (SAM) with related electronics.

Calibre (mm)		130
Length (mm)		230
Mass (kg)		8.65
Explosive mass (kg)		1.8
Effective range (m)		min 14
Maximum fragmentation range (m)		300
SAM M17SP	Dimension (mm)	Ø55 × 61
	Self-destruction	outside command
	Arming	power from the aircraft and 4 levels of safety
	Reliable action time	5 hours after launch and after arming
	Power consumption (W)	< 5

75

FUZES

UNIVERSAL FUZE FOR MORTAR SHELLS UT M18

The universal fuze for mortar shells UT M18 is designed to fire HE mortar ammunition thrown out from the carrier installed on the aircraft (throwing out from the height).

The fuze is mechanical with safety and arming device.

The special fuze ensures the superquick (SQ) function for destroying the target with fragmentation effect.

The function of special fuze is to ensure the safe, secure and reliable action of standard mortar shell of calibers 60 mm, 81/82 mm and 120 mm.

Also, the special fuze provides the mechanical interfaces with the mortar shell and the carrier (container) on the aircraft.

Type	point detonating, mechanical
Fuze mass (kg)	0.224
Fuze overall dimension (mm)	Ø49 x 92.3
Overall dimension, witout booster (mm)	Ø49 x 70
Adapter of connecting thread on fuze for shell 60 mm M62P8	M38 x 2 6H
Adapter of connecting thread on fuze for shell 120 mm M62P8	M43 x 2 6H
Storage temperature (°C)	-30 ÷ +70
Operating temperature (°C)	-10 ÷ +55

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

75

SPECIAL PURPOSE RESOURCES
26.5 mm

TRIP FLARE 26.5 mm

The trip flare 26.5 mm is designated for security and surveillance of parts of an area, posts, dams and various facilities during day and night.

Calibre (mm)	26.5
Mass of patrone (g)	58
Patrone length (mm)	78
Flare burning time (s)	15
Sound intensity (dB)	115
Light intensity (cd)	10000
Delay time (s)	0.6 ÷ 1.2
Middle wave length (nm)	589±5
Height of the rising of sound signal (m)	10
Operating temperature (°C)	-35 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

SIGNAL AMMUNITION 26.5 mm

(for 26 mm signal pistol)

SIGNAL CARTRIDGE 26.5 mm ABC / LP 57

The signal cartridge 26.5 mm ABC / LP 57 is designated for giving light and sound signal.

Calibre (mm)	26.5
Cartridge mass (g)	115
Cartridge length (mm)	170
Flare burning time (s)	4.5 ÷ 7.5
Flare type	white-red-white
Pipe duration (s)	4.5 ÷ 7.5
Sound intensity (dB)	115
Flare range height (m)	175 ÷ 225
Light intensity (cd)	10000
Operating temperature (°C)	-35 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

SIGNAL AMMUNITION 26.5 mm

(for 26 mm signal pistol)

SIGNAL CARTRIDGE 26.5 mm WITH PARACHUTE / LP 57

The signal cartridge 26.5 mm with parachute / LP 57 is designated for illuminating of terrain in night conditions and conditions of low visability.

Calibre (mm)	26.5
Cartridge mass (g)	115
Cartridge length (mm)	155
Flare burning time (s)	15
Flare range height (m)	70 ÷ 100
Light intensity (cd)	20000
Color saturation (%)	> 78
Middle wave length (nm)	589±3
Operating temperature (°C)	-35 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

SIGNAL AMMUNITION 26.5 mm

(for 26 mm signal pistol)

SIGNAL CARTRIDGE 26.5 mm WHITE / LP 57

The signal cartridge 26.5 mm white / LP 57 is designated for giving light signals.

Calibre (mm)	26.5
Cartridge mass (g)	60
Cartridge length (mm)	80
Flare burning time (s)	6.5 ÷ 9.5
Flare range height (m)	100 ÷ 140
Light intensity (cd)	20000
Color saturation (%)	< 58
Middle wave length (nm)	580±3
Operating temperature (°C)	-35 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

SIGNAL AMMUNITION 26.5 mm

(for 26 mm signal pistol)

SIGNAL CARTRIDGE 26.5 mm RED / LP 57

The signal cartridge 26.5 mm red / LP 57 is designated for giving light signals.

Calibre (mm)	26.5
Cartridge mass (g)	60
Cartridge length (mm)	80
Flare burning time (s)	6.5 ÷ 9.5
Flare range height (m)	100 ÷ 140
Light intensity (cd)	20000
Color saturation (%)	> 70
Middle wave length (nm)	609±3
Operating temperature (°C)	-35 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

SIGNAL AMMUNITION 26.5 mm

(for 26 mm signal pistol)

SIGNAL CARTRIDGE 26.5 mm GREEN / LP 57

The signal cartridge 26.5 mm green / LP 57 is designated for giving light signals.

Calibre (mm)	26.5
Cartridge mass (g)	60
Cartridge length (mm)	80
Flare burning time (s)	6.5 ÷ 9.5
Flare range height (m)	100 ÷ 140
Light intensity (cd)	10000
Color saturation (%)	> 57
Middle wave length (nm)	554±3
Operating temperature (°C)	-35 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

SIGNAL AMMUNITION 26.5 mm

(for 26 mm signal pistol)

SIGNAL CARTRIDGE 26.5 mm SMOKE VIOLET / LP 57

The signal cartridge 26.5 mm smoke violet / LP 57 is designated for giving smoke signals.

Calibre (mm)	26.5
Cartridge mass (g)	55
Cartridge length (mm)	80
Smoke time, from trajectory vertex to falling on land (s)	≈ 10
Flare range height (m)	100 ÷ 140
Operating temperature (°C)	-35 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 38 mm

(for 38 mm signal pistol, 38 mm multi-purpose gun or other similar weapons)

CARTRIDGE 38 mm WITH RUBBER BALLS P1

The cartridge 38 mm with rubber balls P1 is to be used for anti-riot control.

Calibre (mm)	38
Cartridge mass (g)	120
Cartridge length (mm)	122.5
Number of balls	24
Ball diameter (mm)	15
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 38 mm

**(for 38 mm signal pistol,
38 mm multi-purpose gun
or other similar weapons)**

CARTRIDGE 38 mm WITH SINGLE BATON RUBBER P1

The cartridge 38 mm with single baton rubber P1 is to be used for anti-riot control.

Calibre (mm)	38
Cartridge mass (g)	186
Cartridge length (mm)	122.5
Projectile length (mm)	98
Max range (m)	120±20
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 38 mm

**(for 38 mm signal pistol,
38 mm multi-purpose gun
or other similar weapons)**

CARTRIDGE 38 mm WITH THREE PART BATON RUBBER P1

The cartridge 38 mm with three part baton rubber P1 is to be used for anti-riot control.

Calibre (mm)	38
Cartridge mass (g)	186
Projectile mass (g)	43
Cartridge length (mm)	122.5
Projectile length (mm)	98
Max range (m)	100±20
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 38 mm

**(for 38 mm signal pistol,
38 mm multi-purpose gun
or other similar weapons)**

CARTRIDGE 38 mm SIGNAL (RED, WHITE, GREEN)

The cartridge 38 mm signal (red, white, green) is designated for giving light signals.

Calibre (mm)	38
Cartridge mass (g)	100
Cartridge length (mm)	70
Flare burning time (s)	6
Flare range height (m)	80
Light intensity (cd)	40000
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

AMMUNITION 38 mm

(for 38 mm signal pistol, 38 mm multi-purpose gun or other similar weapons)

CARTRIDGE 38 mm SMOKE

The cartridge 38 mm smoke is intended for creating of smoke screens and smoking of different terrains.

Calibre (mm)	38
Cartridge mass (g)	190
Cartridge length (mm)	122.5
Delay time (s)	1 ÷ 3
Smoke time (s)	min 45
Firing range (m)	100
Smoke type	white
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 38 mm

**(for 38 mm signal pistol,
38 mm multi-purpose gun
or other similar weapons)**

CARTRIDGE 38 mm SMOKE CS

The cartridge 38 mm smoke CS is used by special forces of the Army and the police, for anti-terrorist actions, as well as for preventing and disabling any riots.

Calibre (mm)	38
Cartridge mass (g)	180
Cartridge length (mm)	122.5
Delay time (s)	1 ÷ 3
Smoke time (s)	min 20
Firing range (m)	100
Smoke type	CS
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

HAND GRENADES 40 mm

GRENADE HAND STUN&FLASH THREE PART M13 (40 mm)

The grenade hand stun&flash three part M13 (40 mm) is designated for temporary disabling in enclosed and open areas.

It is used by the special military and police forces, for anti-terroristic actions and riot controls and prevention of any type of disorder.

Calibre (mm)	40
Mass (g)	415
Length (mm)	164
Delay time (s)	2.5 ÷ 5
Sound intensity (dB)	120
Flash bang part	three part
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

75

HAND GRENADES 40 mm

GRENADE HAND SMOKE THREE PART CS

The grenade hand smoke three part CS is used by special forces of the Army and the police, for anti-terrorist actions, as well as for preventing and disabling any riots.

Calibre (mm)	40
Mass (g)	265
Length (mm)	170
Delay time (s)	2 ÷ 5
Smoke time (s)	20
Smoke part CS	3
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

HAND GRENADES 45 mm

GRENADE HAND STUN&FLASH (45 mm)

The grenade hand stun&flash (45 mm) is designated for temporary disabling in enclosed and open areas.

It is used by the special military and police forces, for anti-terroristic actions and riot controls and prevention of any type of disorder.

Calibre (mm)	45
Mass (g)	145
Length (mm)	138
Delay time (s)	2.5 ÷ 5
Sound intensity (dB)	120
Operating temperature (°C)	-42 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

75

HAND GRENADES 45 mm

GRENADE HAND SMOKE (45 mm)

The grenade hand smoke (45 mm) is designated to create the smoke screens and to distribute smoke on the various terrains.

Calibre (mm)	45
Mass (g)	250
Length (mm)	136
Delay time (s)	2.5 ÷ 5
Smoke time (s)	60
Smoke type	white, red, green, blue, yellow, orange
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

HAND GRENADES 53 mm

GRENADE HAND SMOKE (53 mm)

The grenade hand smoke (53 mm) is designated to create the smoke screens, to distribute smoke on the various terrains and for signaling.

Calibre (mm)	53
Mass (g)	450
Length (mm)	165
Delay time (s)	3.5 ÷ 5.5
Smoke time (s)	min 50
Smoke type	white, red, green, blue, yellow, orange
Operating temperature (°C)	-35 ÷ +63

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

SMOKE GRENADES 81 mm

81 mm SMOKE GRENADE GD2

The 81 mm smoke grenade GD2 is designed to create smoke screens.
It is fired from the 81 mm smoke grenade launcher.

Calibre (mm)	81
Grenade mass (g)	2340
Length (mm)	217
Delay time (s)	9.5±2.5
Smoke time (s)	100
Smoke height (m)	3 ÷ 10
Smoke diameter (m)	10 ÷ 30
Range (m)	250
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

SMOKE GRENADES 82 mm

GRENADE 82 mm SMOKE POT M79

The grenade 82 mm smoke pot M79 is intended for creating smoke curtains.

It is designed for firing from the 82 mm smoke box launchers and it can also be activated manually with mechanical fuze.

Calibre (mm)	82
Grenade mass (g)	1500
Length (mm)	150
Delay time (s)	2.6±0.4
Smoke time (s)	150 ÷ 300
Smoke height (m)	3 ÷ 10
Smoke diameter (m)	10 ÷ 20
Range (m)	min 100
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 20 mm x 102

(for guns M621, M61A, M39 and M197)

ROUND 20 mm x 102 HE/HEI

The 20 mm x 102 HE/HEI Round consists of a brass cartridge case with an electrical gun primer, propellant charge and a high-explosive projectile.

The HE projectile is loaded with explosive composition and fitted with point-detonating fuze.

Projectile designated as HEI is loaded with explosive-incendiary composition.

Calibre (mm)	20
Muzzle velocity (m/s)	1030±15
Maximum pressure of powder gases (MPa)	430
Fuze arming distance (m)	183±23
Round mass (g)	259
Projectile mass (g)	100±1.7
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 20 mm x 102

(for guns M621, M61A, M39 and M197)

ROUND 20 mm x 102 AP

The 20 mm x 102 AP Round consists of a brass cartridge case with an electrical gun primer, propellant charge and an armour-piercing projectile.

Calibre (mm)	20
Muzzle velocity (m/s)	1000±15
Maximum pressure of powder gases (MPa)	430
Round mass (g)	265
Projectile mass (g)	102.5±1.7
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 20 mm x 102

(for guns M621, M61A, M39 and M197)

ROUND 20 mm x 102 AP-T

The 20 mm x 102 AP-T Round consists of a brass cartridge case with an electrical gun primer, propellant charge and an armour-piercing tracer projectile.

The AP-T projectile is filled with tracer composition.

Calibre (mm)	20
Muzzle velocity (m/s)	1000±15
Maximum pressure of powder gases (MPa)	430
Round mass (g)	270
Projectile mass (g)	108±1.7
Tracer burning time (s)	min 3.2
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 20 mm x 102

(for guns M621, M61A, M39 and M197)

ROUND 20 mm x 102 TP

The 20 mm x 102 TP Round consists of a brass cartridge case with an electrical gun primer, propellant charge and a target practice projectile.

Calibre (mm)	20
Muzzle velocity (m/s)	1030±15
Maximum pressure of powder gases (MPa)	430
Round mass (g)	259
Projectile mass (g)	100±1.7
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 20 mm x 110

(for antiaircraft guns 20 mm M55, HS 404 Hispano and HS 804 Hispano)

ROUND 20 mm x 110 HE/HEI

The 20 mm x 110 HE/HEI Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a high-explosive projectile.

The HE projectile is loaded with explosive composition and fitted with point-detonating fuze with mechanical self-destruction.

Projectile designated as HEI is loaded with explosive-incendiary composition.

Calibre (mm)	20
Muzzle velocity (m/s)	850±10
Maximum pressure of powder gases (MPa)	304.1
Fuze arming distance (m)	150
Fuze self-destruction time (s)	4.5 ÷ 8
Round mass (g)	257±6
Projectile mass (g)	130±2
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 20 mm x 110

(for antiaircraft guns 20 mm M55, HS 404 Hispano and HS 804 Hispano)

ROUND 20 mm x 110 HE-T/HEI-T

The 20 mm x 110 HE-T/HEI-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a high-explosive tracer projectile.

The HE-T projectile is loaded with explosive and tracer composition and fitted with point-detonating fuze with mechanical self-destruction.

Projectile designated as HEI-T is loaded with explosive-incendiary and tracer composition.

Calibre (mm)	20
Muzzle velocity (m/s)	850±10
Maximum pressure of powder gases (MPa)	304.1
Fuze arming distance (m)	150
Fuze self-destruction time (s)	4.5 ÷ 8
Tracer burning time (s)	min 3.2
Round mass (g)	261±6
Projectile mass (g)	135±2
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 20 mm x 110

(for antiaircraft guns 20 mm M55, HS 404 Hispano and HS 804 Hispano)

ROUND 20 mm x 110 AP-T

The 20 mm x 110 AP-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and an armour-piercing tracer projectile.

The AP-T projectile is filled with tracer composition.

Calibre (mm)	20
Muzzle velocity (m/s)	840±10
Maximum pressure of powder gases (MPa)	304.1
Round mass (g)	273±6
Projectile mass (g)	142±2.5
Tracer burning time (s)	min 3.2
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 20 mm x 110

(for antiaircraft guns 20 mm M55, HS 404 Hispano and HS 804 Hispano)

ROUND 20 mm x 110 API

The 20 mm x 110 API Round consists of a brass cartridge case with a percussion gun primer, propellant charge and an armour-piercing incendiary projectile.

The API projectile is filled with incendiary composition.

Calibre (mm)	20
Muzzle velocity (m/s)	840±10
Maximum pressure of powder gases (MPa)	304.1
Round mass (g)	273±6
Projectile mass (g)	142±2.5
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 20 mm x 110

(for antiaircraft guns 20 mm M55, HS 404 Hispano and HS 804 Hispano)

ROUND 20 mm x 110 API-T

The 20 mm x 110 API-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and an armour-piercing incendiary tracer projectile.

The API-T projectile is filled with incendiary and tracer compositions.

Calibre (mm)	20
Muzzle velocity (m/s)	840±10
Maximum pressure of powder gases (MPa)	304.1
Round mass (g)	273±6
Projectile mass (g)	142±2.5
Tracer burning time (s)	min 2
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 20 mm x 110

(for antiaircraft guns 20 mm M55, HS 404 Hispano and HS 804 Hispano)

ROUND 20 mm x 110 TP

The 20 mm x 110 TP Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a target practice projectile.

Calibre (mm)	20
Muzzle velocity (m/s)	850±10
Maximum pressure of powder gases (MPa)	304.1
Round mass (g)	257±6
Projectile mass (g)	130±2
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 20 mm x 110

(for antiaircraft guns 20 mm M55, HS 404 Hispano and HS 804 Hispano)

ROUND 20 mm x 110 TP-T

The 20 mm x 110 TP-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a target practice tracer projectile.

The TP-T projectile is filled with tracer composition.

Calibre (mm)	20
Muzzle velocity (m/s)	850±10
Maximum pressure of powder gases (MPa)	304.1
Round mass (g)	261±6
Projectile mass (g)	137±2
Tracer burning time (s)	min 3.2
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 20 mm x 110

(for 20 mm subcaliber training barrels M78 and M79 fitted to larger weapons)

ROUND 20 mm x 110 TP

The 20 mm x 110 TP Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a training projectile.

This type of TP projectile is loaded with flash composition and fitted with point-detonating fuze with mechanical self-destruction.

Calibre (mm)	20
Muzzle velocity (m/s)	850±10
Maximum pressure of powder gases (MPa)	303
Fuze arming distance (m)	150
Fuze self-destruction time (s)	min 12
Round mass (g)	257
Projectile mass (g)	127±2
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 20 mm x 110

(for 20 mm subcaliber training barrels M78 and M79 fitted to larger weapons)

ROUND 20 mm x 110 TP-T

The 20 mm x 110 TP-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a training tracer projectile.

This type of TP-T projectile is loaded with flash and tracer composition and fitted with point-detonating fuze with mechanical self-destruction.

Calibre (mm)	20
Muzzle velocity (m/s)	850±10
Maximum pressure of powder gases (MPa)	303
Fuze arming distance (m)	150
Fuze self-destruction time (s)	4.5 ÷ 8
Round mass (g)	259
Projectile mass (g)	134.3±2
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 20 mm x 110RB

(for antiaircraft gun 20 mm MK-IV Oerlikon)

ROUND 20 mm x 110RB HE/HEI

The 20 mm x 110RB HE/HEI Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a high-explosive projectile.

The HE projectile is loaded with explosive composition and fitted with point-detonating fuze with mechanical self-destruction.

Projectile designated as HEI is loaded with explosive-incendiary composition.

Calibre (mm)	20
Muzzle velocity (m/s)	845±10
Maximum pressure of powder gases (MPa)	328.6
Fuze arming distance (m)	200
Fuze self-destruction time (s)	4.5 ÷ 9.5
Round mass (g)	243±6
Projectile mass (g)	119±2
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 20 mm x 110RB

**(for antiaircraft gun
20 mm MK-IV Oerlikon)**

ROUND 20 mm x 110RB
HE-T/HEI-T

The 20 mm x 110RB HE-T/HEI-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a high-explosive tracer projectile.

The HE-T projectile is loaded with explosive and tracer composition and fitted with point-detonating fuze with mechanical self-destruction.

Projectile designated as HEI-T is loaded with explosive-incendiary and tracer composition.

Calibre (mm)	20
Muzzle velocity (m/s)	845±10
Maximum pressure of powder gases (MPa)	328.6
Fuze arming distance (m)	200
Fuze self-destruction time (s)	4.5 ÷ 9.5
Tracer burning time (s)	min 3.5
Round mass (g)	246±6
Projectile mass (g)	122±2
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 20 mm x 110RB

**(for antiaircraft gun
20 mm MK-IV Oerlikon)**

ROUND 20 mm x 110RB AP-T

The 20 mm x 110RB AP-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and an armour-piercing tracer projectile.

The AP-T projectile is filled with tracer composition.

Calibre (mm)	20
Muzzle velocity (m/s)	800±15
Maximum pressure of powder gases (MPa)	386
Round mass (g)	265±8
Projectile mass (g)	142±2
Tracer burning time (s)	min 3.5
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 20 mm x 110RB

(for antiaircraft gun 20 mm MK-IV Oerlikon)

ROUND 20 mm x 110RB API

The 20 mm x 110RB API Round consists of a brass cartridge case with a percussion gun primer, propellant charge and an armour-piercing incendiary projectile.

The API projectile is filled with incendiary composition.

Calibre (mm)	20
Muzzle velocity (m/s)	800±15
Maximum pressure of powder gases (MPa)	386
Round mass (g)	265±8
Projectile mass (g)	142±2
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 20 mm x 110RB

**(for antiaircraft gun
20 mm MK-IV Oerlikon)**

ROUND 20 mm x 110RB TP

The 20 mm x 110RB TP Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a target practice projectile.

Calibre (mm)	20
Muzzle velocity (m/s)	845±10
Maximum pressure of powder gases (MPa)	328.6
Round mass (g)	243±6
Projectile mass (g)	119±2
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 20 mm x 110RB

(for antiaircraft gun 20 mm MK-IV Oerlikon)

ROUND 20 mm x 110RB TP-T

The 20 mm x 110RB TP-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a target practice tracer projectile.

The TP-T projectile is filled with tracer composition.

Calibre (mm)	20
Muzzle velocity (m/s)	845±10
Maximum pressure of powder gases (MPa)	328.6
Round mass (g)	246±6
Projectile mass (g)	122±2.5
Tracer burning time (s)	min 3.5
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 23 mm x 115

(for aircraft guns 23 mm GSh-23L, GSh-23LU and GSh-6-23)

ROUND 23 mm x 115 HE/HEI

The 23 mm x 115 HE/HEI Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a high-explosive projectile.

The HE projectile is loaded with explosive composition and fitted with point-detonating fuze.

Projectile designated as HEI is loaded with explosive-incendiary composition.

Calibre (mm)	23
Muzzle velocity (m/s)	720±10
Maximum pressure of powder gases (MPa)	300
Fuze arming distance (m)	100
Round mass (g)	329±8
Projectile mass (g)	174±3.5
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 23 mm x 115

(for aircraft guns 23 mm GSh-23L, GSh-23LU and GSh-6-23)

ROUND 23 mm x 115 HE-T/HEI-T

The 23 mm x 115 HE-T/HEI-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a high-explosive tracer projectile.

The HE-T projectile is loaded with explosive and tracer composition and fitted with point-detonating fuze.

Projectile designated as HEI-T is loaded with explosive-incendiary and tracer composition.

Calibre (mm)	23
Muzzle velocity (m/s)	720±10
Maximum pressure of powder gases (MPa)	300
Fuze arming distance (m)	100
Tracer burning time (s)	min 3.6
Round mass (g)	329±8
Projectile mass (g)	174±3.5
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 23 mm x 115

(for aircraft guns 23 mm GSh-23L, GSh-23LU and GSh-6-23)

ROUND 23 mm x 115 API

The 23 mm x 115 API Round consists of a brass cartridge case with a percussion gun primer, propellant charge and an armour-piercing incendiary projectile.

The API projectile is filled with incendiary composition.

Calibre (mm)	23
Muzzle velocity (m/s)	720±10
Maximum pressure of powder gases (MPa)	300
Round mass (g)	331±8
Projectile mass (g)	176.5±4
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 23 mm x 115

(for aircraft guns 23 mm GSh-23L, GSh-23LU and GSh-6-23)

ROUND 23 mm x 115 API-T

The 23 mm x 115 API-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and an armour-piercing incendiary tracer projectile.

The API-T projectile is filled with incendiary and tracer composition.

Calibre (mm)	23
Muzzle velocity (m/s)	720±10
Maximum pressure of powder gases (MPa)	300
Round mass (g)	321±8
Projectile mass (g)	168±4
Tracer burning time (s)	min 3
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 23 mm x 115

(for aircraft guns 23 mm GSh-23L, GSh-23LU and GSh-6-23)

ROUND 23 mm x 115 TP

The 23 mm x 115 TP Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a target practice projectile.

Calibre (mm)	23
Muzzle velocity (m/s)	720±10
Maximum pressure of powder gases (MPa)	300
Round mass (g)	329±8
Projectile mass (g)	174±3.5
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

Sloboda

AMMUNITION 23 mm x 115

(for aircraft guns 23 mm GSh-23L, GSh-23LU and GSh-6-23)

ROUND 23 mm x 115 TP-T

The 23 mm x 115 TP-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a target practice tracer projectile.

The TP-T projectile is filled with tracer composition.

Calibre (mm)	23
Muzzle velocity (m/s)	720±10
Maximum pressure of powder gases (MPa)	300
Round mass (g)	329±8
Projectile mass (g)	174±3.5
Tracer burning time (s)	min 3
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

ANTIAIRCRAFT RESOURCES

75

AMMUNITION 23 mm x 152B

(for antiaircraft guns 23 mm ZU-23-2 and ZSU-23-4)

ROUND 23 mm x 152B HE/HEI

The 23 mm x 152B HE/HEI Round consists of a steel cartridge case with a percussion gun primer, propellant charge and a high-explosive projectile.

The HE projectile is loaded with explosive composition and fitted with point-detonating fuze with mechanical self-destruction.

Projectile designated as HEI is loaded with explosive-incendiary composition.

Calibre (mm)	23
Muzzle velocity (m/s)	970±10
Maximum pressure of powder gases (MPa)	300
Fuze arming distance (m)	100
Fuze self-destruction time (s)	5.6 ÷ 11.2
Round mass (g)	441±8
Projectile mass (g)	182±3
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 23 mm x 152B

(for antiaircraft guns 23 mm ZU-23-2 and ZSU-23-4)

ROUND 23 mm x 152B HE-T/HEI-T

The 23 mm x 152B HE-T/HEI-T Round consists of a steel cartridge case with a percussion gun primer, propellant charge and a high-explosive tracer projectile.

The HE-T projectile is loaded with explosive and tracer composition and fitted with point-detonating fuze with mechanical self-destruction.

Projectile designated as HEI-T is loaded with explosive-incendiary and tracer composition.

Calibre (mm)	23
Muzzle velocity (m/s)	970±10
Maximum pressure of powder gases (MPa)	300
Fuze arming distance (m)	100
Fuze self-destruction time (s)	5.6 ÷ 11.2
Tracer burning time (s)	min 3.5
Round mass (g)	449±8
Projectile mass (g)	191±3
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 23 mm x 152B

**(for antiaircraft guns
23 mm ZU-23-2 and ZSU-23-4)**

ROUND 23 mm x 152B API

The 23 mm x 152B API Round consists of a steel cartridge case with a percussion gun primer, propellant charge and an armour-piercing incendiary projectile.

The API projectile is filled with incendiary composition.

Calibre (mm)	23
Muzzle velocity (m/s)	970±10
Maximum pressure of powder gases (MPa)	300
Round mass (g)	447±8
Projectile mass (g)	189±3
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 23 mm x 152B

**(for antiaircraft guns
23 mm ZU-23-2 and ZSU-23-4)**

ROUND 23 mm x 152B API-T

The 23 mm x 152B API-T Round consists of a steel cartridge case with a percussion gun primer, propellant charge and an armour-piercing incendiary tracer projectile.

The API-T projectile is filled with incendiary and tracer composition.

Calibre (mm)	23
Muzzle velocity (m/s)	970±10
Maximum pressure of powder gases (MPa)	300
Round mass (g)	447±8
Projectile mass (g)	189±3
Tracer burning time (s)	min 3.5
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 23 mm x 152B

(for antiaircraft guns 23 mm ZU-23-2 and ZSU-23-4)

ROUND 23 mm x 152B TP

The 23 mm x 152B TP Round consists of a steel cartridge case with a percussion gun primer, propellant charge and a target practice projectile.

Calibre (mm)	23
Muzzle velocity (m/s)	970±10
Maximum pressure of powder gases (MPa)	300
Round mass (g)	441±8
Projectile mass (g)	182±3
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

Sloboda

ANTIAIRCRAFT RESOURCES

75

AMMUNITION 23 mm x 152B

**(for antiaircraft guns
23 mm ZU-23-2 and ZSU-23-4)**

ROUND 23 mm x 152B TP-T

The 23 mm x 152B TP-T Round consists of a steel cartridge case with a percussion gun primer, propellant charge and a target practice tracer projectile.

The TP-T projectile is filled with tracer composition.

Calibre (mm)	23
Muzzle velocity (m/s)	970±10
Maximum pressure of powder gases (MPa)	300
Round mass (g)	449±8
Projectile mass (g)	191±3
Tracer burning time (s)	min 3.5
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 30 mm x 165

(for antiaircraft gun AO-18 and naval gun AK-630M)

ROUND 30 mm x 165 HE/HEI

The 30 mm x 165 HE/HEI Round consists of a steel cartridge case with an electrical gun primer, propellant charge and a high-explosive projectile.

The HE projectile is loaded with explosive composition and fitted with point-detonating fuze, with delayed action and pyrotechnical self-destruction.

Projectile designated as HEI is loaded with explosive-incendiary composition.

Calibre (mm)	30
Muzzle velocity (m/s)	890±15
Maximum pressure of powder gases (MPa)	330
Fuze arming distance (m)	100
Fuze self-destruction time (s)	13 ÷ 19
Round mass (g)	833
Projectile mass (g)	389±6
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 30 mm x 165

(for antiaircraft gun AO-18 and naval gun AK-630M)

ROUND 30 mm x 165 HE-T/HEI-T

The 30 mm x 165 HE-T/HEI-T Round consists of a steel cartridge case with an electrical gun primer, propellant charge and a high-explosive tracer projectile.

The HE-T projectile is loaded with explosive and tracer composition and fitted with point-detonating fuze, with delayed action and pyrotechnical self-destruction.

Projectile designated as HEI-T is loaded with explosive-incendiary and tracer composition.

Calibre (mm)	30
Muzzle velocity (m/s)	890±15
Maximum pressure of powder gases (MPa)	330
Fuze arming distance (m)	100
Fuze self-destruction time (s)	13 ÷ 19
Tracer burning time (s)	min 10
Round mass (g)	830
Projectile mass (g)	386±6
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 30 mm x 165

(for antiaircraft gun AO-18 and naval gun AK-630M)

ROUND 30 mm x 165 AP

The 30 mm x 165 AP Round consists of a steel cartridge case with an electrical gun primer, propellant charge and an armour-piercing projectile.

Calibre (mm)	30
Muzzle velocity (m/s)	890±15
Maximum pressure of powder gases (MPa)	330
Round mass (g)	845
Projectile mass (g)	400±6
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 30 mm x 165

(for antiaircraft gun AO-18 and naval gun AK-630M)

ROUND 30 mm x 165 AP-T

The 30 mm x 165 AP-T Round consists of a steel cartridge case with an electrical gun primer, propellant charge and an armour-piercing tracer projectile.

The AP-T projectile is filled with tracer composition.

Calibre (mm)	30
Muzzle velocity (m/s)	890±15
Maximum pressure of powder gases (MPa)	330
Round mass (g)	845
Projectile mass (g)	400±6
Tracer burning time (s)	min 3.5
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 30 mm x 165

(for antiaircraft gun AO-18 and naval gun AK-630M)

ROUND 30 mm x 165 TP

The 30 mm x 165 TP Round consists of a steel cartridge case with an electrical gun primer, propellant charge and a target practice projectile.

Calibre (mm)	30
Muzzle velocity (m/s)	890±15
Maximum pressure of powder gases (MPa)	330
Round mass (g)	833
Projectile mass (g)	389±6
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 30 mm x 165

(for antiaircraft gun AO-18 and naval gun AK-630M)

ROUND 30 mm x 165 TP-T

The 30 mm x 165 TP-T Round consists of a steel cartridge case with an electrical gun primer, propellant charge and a target practice tracer projectile.

The TP-T projectile is filled with tracer composition.

Calibre (mm)	30
Muzzle velocity (m/s)	890±15
Maximum pressure of powder gases (MPa)	330
Round mass (g)	830
Projectile mass (g)	386±6
Tracer burning time (s)	min 3
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 30 mm x 165

(for aircraft guns 30 mm GSh-30, GSh-301 and GSh-30K)

ROUND 30 mm x 165 HE/HEI

The 30 mm x 165 HE/HEI Round consists of a steel cartridge case with an electrical gun primer, propellant charge and a high-explosive projectile.

The HE projectile is loaded with explosive composition and fitted with point-detonating fuze, with delayed action.

Projectile designated as HEI is loaded with explosive-incendiary composition.

Calibre (mm)	30
Muzzle velocity (m/s)	860±15
Maximum pressure of powder gases (MPa)	325
Fuze arming distance (m)	150
Round mass (g)	833
Projectile mass (g)	389±6
Operating temperature (°C)	-40 ÷ +60

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 30 mm x 165

(for aircraft guns 30 mm GSh-30, GSh-301 and GSh-30K)

ROUND 30 mm x 165 AP

The 30 mm x 165 AP Round consists of a steel cartridge case with an electrical gun primer, propellant charge and an armour-piercing projectile.

Calibre (mm)	30
Muzzle velocity (m/s)	860±15
Maximum pressure of powder gases (MPa)	325
Round mass (g)	845
Projectile mass (g)	400±6
Operating temperature (°C)	-40 ÷ +60

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 30 mm x 165

(for aircraft guns 30 mm GSh-30, GSh-301 and GSh-30K)

ROUND 30 mm x 165 AP-T

The 30 mm x 165 AP-T Round consists of a steel cartridge case with an electrical gun primer, propellant charge and an armour-piercing tracer projectile.

The AP-T projectile is filled with tracer composition.

Calibre (mm)	30
Muzzle velocity (m/s)	860±15
Maximum pressure of powder gases (MPa)	325
Round mass (g)	845
Projectile mass (g)	400±6
Tracer burning time (s)	min 3.5
Operating temperature (°C)	-40 ÷ +60

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 30 mm x 165

(for aircraft guns 30 mm GSh-30, GSh-301 and GSh-30K)

ROUND 30 mm x 165 TP

The 30 mm x 165 TP Round consists of a steel cartridge case with an electrical gun primer, propellant charge and a target practice projectile.

Calibre (mm)	30
Muzzle velocity (m/s)	860±15
Maximum pressure of powder gases (MPa)	325
Round mass (g)	833
Projectile mass (g)	389±6
Operating temperature (°C)	-40 ÷ +60

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 30 mm x 165

(for antiaircraft guns 2A42, 2A72 and 2A38M)

ROUND 30 mm x 165 HE/HEI

The 30 mm x 165 HE/HEI Round consists of a steel cartridge case with a percussion gun primer, propellant charge and a high-explosive projectile.

The HE projectile is loaded with explosive composition and fitted with point-detonating fuze, with delayed action and pyrotechnical self-destruction.

Projectile designated as HEI is loaded with explosive-incendiary composition.

Calibre (mm)	30
Muzzle velocity (m/s)	960±15
Maximum pressure of powder gases (MPa)	360
Fuze arming distance (m)	100
Fuze self-destruction time (s)	7.5 ÷ 14.5
Round mass (g)	833
Projectile mass (g)	389±6
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 30 mm x 165

(for antiaircraft guns 2A42, 2A72 and 2A38M)

ROUND 30 mm x 165 HE-T/HEI-T

The 30 mm x 165 HE-T/HEI-T Round consists of a steel cartridge case with a percussion gun primer, propellant charge and a high-explosive tracer projectile.

The HE-T projectile is loaded with explosive and tracer composition and fitted with point-detonating fuze, with delayed action and pyrotechnical self-destruction.

Projectile designated as HEI-T is loaded with explosive-incendiary and tracer composition.

Calibre (mm)	30
Muzzle velocity (m/s)	960±15
Maximum pressure of powder gases (MPa)	360
Fuze arming distance (m)	100
Fuze self-destruction time (s)	7.5 ÷ 14.5
Tracer burning time (s)	min 10
Round mass (g)	832
Projectile mass (g)	386±6
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 30 mm x 165

(for antiaircraft guns 2A42, 2A72 and 2A38M)

ROUND 30 mm x 165 AP

The 30 mm x 165 AP Round consists of a steel cartridge case with a percussion gun primer, propellant charge and an armour-piercing projectile.

Calibre (mm)	30
Muzzle velocity (m/s)	970±15
Maximum pressure of powder gases (MPa)	360
Round mass (g)	853
Projectile mass (g)	400±6
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 30 mm x 165

(for antiaircraft guns 2A42, 2A72 and 2A38M)

ROUND 30 mm x 165 AP-T

The 30 mm x 165 AP-T Round consists of a steel cartridge case with a percussion gun primer, propellant charge and an armour-piercing tracer projectile.

The AP-T projectile is filled with tracer composition.

Calibre (mm)	30
Muzzle velocity (m/s)	970±15
Maximum pressure of powder gases (MPa)	360
Round mass (g)	853
Projectile mass (g)	400±6
Tracer burning time (s)	min 3.5
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 30 mm x 165

(for antiaircraft guns 2A42, 2A72 and 2A38M)

ROUND 30 mm x 165 TP

The 30 mm x 165 TP Round consists of a steel cartridge case with a percussion gun primer, propellant charge and a target practice projectile.

Calibre (mm)	30
Muzzle velocity (m/s)	960±15
Maximum pressure of powder gases (MPa)	360
Round mass (g)	833
Projectile mass (g)	389±6
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 30 mm x 165

(for antiaircraft guns 2A42, 2A72 and 2A38M)

ROUND 30 mm x 165 TP-T

The 30 mm x 165 TP-T Round consists of a steel cartridge case with a percussion gun primer, propellant charge and a target practice tracer projectile.

The TP-T projectile is filled with tracer composition.

Calibre (mm)	30
Muzzle velocity (m/s)	960±15
Maximum pressure of powder gases (MPa)	360
Round mass (g)	833
Projectile mass (g)	389±6
Tracer burning time (s)	min 3
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

AMMUNITION 30 mm x 173

(for gun MK30-2 and domestic gun 30 mm TA M12)

ROUND 30 mm x 173 HE/HEI

The 30 mm x 173 HE/HEI Round consists of steel cartridge case with percussion gun primer, propellant charge and high-explosive projectile.

The HE projectile is loaded with explosive composition and fitted with point-detonating fuze, with delayed action and pyrotechnical self-destruction.

Projectile designated as HEI is loaded with explosive-incendiary composition.

Calibre (mm)	30
Muzzle velocity (m/s)	1100±15
Maximum pressure of powder gases, piezo (MPa)	430
Fuze arming distance (m)	100
Fuze self-destruction time (s)	7.5 ÷ 14.5
Round mass (g)	≈ 840
Projectile mass (g)	357±5
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 30 mm x 173

(for gun MK30-2 and domestic gun 30 mm TA M12)

ROUND 30 mm x 173 HE-T/HEI-T

The 30 mm x 173 HE-T/HEI-T Round consists of steel cartridge case with percussion gun primer, propellant charge and high-explosive tracer projectile.

The HE-T projectile is loaded with explosive and tracer compositions and fitted with point-detonating fuze, with delayed action and pyrotechnical self-destruction.

Projectile designated as HEI-T is loaded with explosive-incendiary and tracer compositions.

Calibre (mm)	30
Muzzle velocity (m/s)	1100±15
Maximum pressure of powder gases, piezo (MPa)	430
Fuze arming distance (m)	100
Fuze self-destruction time (s)	7.5 ÷ 14.5
Tracer burnung time (s)	min 3.5
Round mass (g)	≈ 840
Projectile mass (g)	357±5
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 30 mm x 173

(for gun MK30-2 and domestic gun 30 mm TA M12)

ROUND 30 mm x 173 AP

The 30 mm x 173 AP Round consists of steel cartridge case with percussion gun primer, propellant charge and armour-piercing projectile.

Calibre (mm)	30
Muzzle velocity (m/s)	1100±15
Maximum pressure of powder gases, piezo (MPa)	430
Round mass (g)	≈ 845
Projectile mass (g)	362±5
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 30 mm x 173

(for gun MK30-2 and domestic gun 30 mm TA M12)

ROUND 30 mm x 173 TP

The 30 mm x 173 TP Round consists of steel cartridge case with percussion gun primer, propellant charge and target practice projectile.

Calibre (mm)	30
Muzzle velocity (m/s)	1100±15
Maximum pressure of powder gases, piezo (MPa)	430
Round mass (g)	≈ 840
Projectile mass (g)	$362\ ^{+5}_{-8}$
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 30 mm x 173

(for gun MK30-2 and domestic gun 30 mm TA M12)

ROUND 30 mm x 173 TP-T

The 30 mm x 173 TP-T Round consists of steel cartridge case with percussion gun primer, propellant charge and target practice tracer projectile.

Calibre (mm)	30
Muzzle velocity (m/s)	1100±15
Maximum pressure of powder gases, piezo (MPa)	430
Tracer burning time (s)	min 3
Round mass (g)	≈ 840
Projectile mass (g)	362±5
Operating temperature (°C)	-40 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 30 mm x 210B

(for antiaircraft gun 30 mm AK-230 and automatic gun 30 mm M86 on BTR 50)

ROUND 30 mm x 210B HE/HEI

The 30 mm x 210B HE/HEI Round consists of a steel cartridge case with an electrical gun primer, propellant charge and a high-explosive projectile.

The HE projectile is loaded with explosive composition and fitted with point-detonating fuze with pyrotechnical self-destruction.

Projectile designated as HEI is loaded with explosive-incendiary composition.

Calibre (mm)	30
Muzzle velocity (m/s)	1045+25
Maximum pressure of powder gases (MPa)	313.8
Fuze arming distance (m)	100
Fuze self-destruction time (s)	12 ÷ 17
Round mass (g)	1066
Projectile mass (g)	356±6
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 30 mm x 220

(for antiaircraft gun 30/2 M53/M59)

ROUND 30 mm x 220 HE-T/HEI-T

The 30 mm x 220 HE-T/HEI-T Round consists of a steel cartridge case with a percussion gun primer, propellant charge and a high-explosive tracer projectile.

The HE-T projectile is loaded with explosive and tracer composition and fitted with point-detonating fuze with mechanical self-destruction.

Projectile designated as HEI-T is loaded with explosive-incendiary and tracer composition.

Calibre (mm)	30
Muzzle velocity (m/s)	997±10
Maximum pressure of powder gases (MPa)	313.8
Fuze arming distance (m)	100
Fuze self-destruction time (s)	6 ÷ 17
Tracer burning time (s)	min 4
Round mass (g)	1140
Projectile mass (g)	435±8
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 37 mm x 252

(for antiaircraft gun 37 mm M1939 - SU)

ROUND 37 mm x 252 HE-T/HEI-T

The 37 mm x 252 HE-T/HEI-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a high-explosive tracer projectile.

The HE-T projectile is loaded with explosive and tracer composition and fitted with point-detonating fuze with pyrotechnical self-destruction.

Projectile designated as HEI-T is loaded with explosive-incendiary and tracer composition.

Calibre (mm)	37
Muzzle velocity (m/s)	866±15
Maximum pressure of powder gases (MPa)	300
Fuze arming distance (m)	300
Fuze self-destruction time (s)	8 ÷ 12
Tracer burning time (s)	min 6
Round mass (g)	1480
Projectile mass (g)	732±8
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 40 mm x 311

(for antiaircraft gun 40 mm L/60 BOFORS)

ROUND 40 mm x 311 HE/HEI

The 40 mm x 311 HE/HEI Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a high-explosive projectile.

The HE projectile is loaded with explosive composition and fitted with point-detonating fuze with pyrotechnical self-destruction.

Projectile designated as HEI is loaded with explosive-incendiary composition.

Calibre (mm)	40
Muzzle velocity (m/s)	880±9
Maximum pressure of powder gases (MPa)	301
Fuze arming distance (m)	200
Fuze self-destruction time (s)	8 ÷ 12
Round mass (g)	2050
Projectile mass (g)	910±15
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm x 311

(for antiaircraft gun 40 mm L/60 BOFORS)

ROUND 40 mm x 311 HE-T/HEI-T

The 40 mm x 311 HE-T/HEI-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a high-explosive tracer projectile.

The HE-T projectile is loaded with explosive and tracer composition and fitted with point-detonating fuze with pyrotechnical self-destruction.

Projectile designated as HEI-T is loaded with explosive-incendiary and tracer composition.

Calibre (mm)	40
Muzzle velocity (m/s)	880±9
Maximum pressure of powder gases (MPa)	301
Fuze arming distance (m)	200
Fuze self-destruction time (s)	8 ÷ 12
Tracer burning time (s)	min 5
Round mass (g)	2050
Projectile mass (g)	910±15
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 40 mm x 311

(for antiaircraft gun 40 mm L/60 BOFORS)

ROUND 40 mm x 311 TP

The 40 mm x 311 TP Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a target practice projectile.

Calibre (mm)	40
Muzzle velocity (m/s)	880±9
Maximum pressure of powder gases (MPa)	301
Round mass (g)	2050
Projectile mass (g)	910±15
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm x 365

(for antiaircraft gun 40 mm L/70 BOFORS)

ROUND 40 mm x 365 HE/HEI

The 40 mm x 365 HE/HEI Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a high-explosive projectile.

The HE projectile is loaded with explosive composition and fitted with point-detonating fuze with pyrotechnical self-destruction.

Projectile designated as HEI is loaded with explosive-incendiary composition.

Calibre (mm)	40
Muzzle velocity (m/s)	1005±12
Maximum pressure of powder gases (MPa)	319
Fuze arming distance (m)	250
Fuze self-destruction time (s)	8 ÷ 13
Round mass (g)	2500
Projectile mass (g)	964±15
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 40 mm x 365

(for antiaircraft gun 40 mm L/70 BOFORS)

ROUND 40 mm x 365 HE-T/HEI-T

The 40 mm x 365 HE-T/HEI-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a high-explosive tracer projectile.

The HE-T projectile is loaded with explosive and tracer composition and fitted with point-detonating fuze with pyrotechnical self-destruction.

Projectile designated as HEI-T is loaded with explosive-incendiary and tracer composition.

Calibre (mm)	40
Muzzle velocity (m/s)	1005±12
Maximum pressure of powder gases (MPa)	319
Fuze arming distance (m)	250
Fuze self-destruction time (s)	8 ÷ 13
Tracer burning time (s)	min 4
Round mass (g)	2500
Projectile mass (g)	964±15
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm x 365

(for antiaircraft gun 40 mm L/70 BOFORS)

ROUND 40 mm x 365 AP

The 40 mm x 365 AP Round consists of a brass cartridge case with a percussion gun primer, propellant charge and an armour-piercing projectile.

Calibre (mm)	40
Muzzle velocity (m/s)	1025±12
Maximum pressure of powder gases (MPa)	319
Round mass (g)	2500
Projectile mass (g)	935±15
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 40 mm x 365

(for antiaircraft gun 40 mm L/70 BOFORS)

ROUND 40 mm x 365 AP-T

The 40 mm x 365 AP-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and an armour-piercing tracer projectile.

The AP-T projectile is filled with tracer composition.

Calibre (mm)	40
Muzzle velocity (m/s)	1025±12
Maximum pressure of powder gases (MPa)	319
Round mass (g)	2500
Projectile mass (g)	935±15
Tracer burning time (s)	min 3
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 40 mm x 365

(for antiaircraft gun 40 mm L/70 BOFORS)

ROUND 40 mm x 365 TP

The 40 mm x 365 TP Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a target practice projectile.

Calibre (mm)	40
Muzzle velocity (m/s)	1005±12
Maximum pressure of powder gases (MPa)	319
Round mass (g)	2500
Projectile mass (g)	964±15
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 40 mm x 365

(for antiaircraft gun 40 mm L/70 BOFORS)

ROUND 40 mm x 365 TP-T

The 40 mm x 365 TP-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a target practice tracer projectile.

The TP-T projectile is filled with tracer composition.

Calibre (mm)	40
Muzzle velocity (m/s)	1005±12
Maximum pressure of powder gases (MPa)	319
Round mass (g)	2500
Projectile mass (g)	964±12
Tracer burning time (s)	min 4
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 57 mm x 348

(for antiaircraft guns 57 mm S-68 and S/60)

ROUND 57 mm x 348 HE-T

The 57 mm x 348 HE-T Round consists of a brass cartridge case with a percussion gun primer, propellant charge and a high-explosive tracer projectile.

The HE-T projectile is loaded with explosive and tracer composition and fitted with point-detonating fuze with pyrotechnical self-destruction.

Calibre (mm)	57
Muzzle velocity (m/s)	1000±15
Maximum pressure of powder gases (MPa)	320
Fuze arming distance (m)	250
Fuze self-destruction time (s)	13 ÷ 17
Tracer burning time (s)	min 10
Round mass (g)	6350
Projectile mass (g)	2850±28
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 57 mm x 438

(for antiaircraft gun 57 mm L/70 BOFORS)

ROUND 57 mm x 438 HE

The 57 mm x 438 HE Round consists of a brass cartridge case with an electrical gun primer, propellant charge and a high-explosive projectile.

The HE projectile is loaded with explosive composition and fitted with point-detonating fuze.

Calibre (mm)	57
Muzzle velocity (m/s)	1020±12
Maximum pressure of powder gases (MPa)	330
Fuze arming distance (m)	400
Round mass (g)	6100
Projectile mass (g)	2400±36
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 57 mm x 438

(for antiaircraft gun 57 mm L/70 BOFORS)

ROUND 57 mm x 438 TP

The 57 mm x 438 TP Round consists of a brass cartridge case with an electrical gun primer, propellant charge and a target practice projectile.

Calibre (mm)	57
Muzzle velocity (m/s)	1020±12
Maximum pressure of powder gases (MPa)	330
Round mass (g)	6100
Projectile mass (g)	2400±36
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 76 mm

(for 76 mm mountain gun M48 B-1)

ROUND 76 mm WITH PROJECTILE HE M70 AND VARIABLE PROPELLANT CHARGE M70

The round 76 mm is separate loaded, with a high-explosive projectile M70 and a variable propellant charge M70.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles.

The projectile is filled with TNT explosive.

A fuze UTI M68P1 is screwed on the projectile.

The variable propellant charge M70 is initiated by a gun primer KT M71.

Calibre (mm)	76
Projectile muzzle velocity (m/s)	398
Mean maximum pressure of powder gases (bar)	≤ 2011
Maximum range (m)	8750
Projectile length, with fuze (mm)	345
Projectile mass, tabular (kg)	6.2
Explosive charge mass (kg)	0.61
Cartridge case length (mm)	385.3
Cartridge case mass (kg)	1.7
Propellant charge mass (kg)	0.38
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 76 mm

(for 76 mm mountain gun M48 B-1)

ROUND 76 mm WITH SMOKE PROJECTILE M60 AND VARIABLE PROPELLANT CHARGE M70

The round 76 mm is separate loaded, with a smoke projectile M60 and a variable propellant charge M70.

It is intended for creating smoke screen on the battlefield.

The projectile is filled with white phosphorus.

A fuze UTI M68P1 is screwed on the projectile.

The variable propellant charge M70 is initiated by a gun primer KT M71.

Calibre (mm)	76
Projectile muzzle velocity (m/s)	398
Mean maximum pressure of powder gases (bar)	≤ 2011
Maximum range (m)	8750
Projectile length, with fuze (mm)	345
Projectile mass, tabular (kg)	6.2
White phosphorus mass (kg)	0.53
Cartridge case length (mm)	385.3
Cartridge case mass (kg)	1.7
Propellant charge mass (kg)	0.38
Operating temperature (°C)	-30 ÷ +50

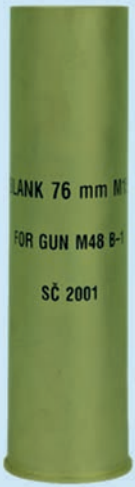
FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 76 mm

(for 76 mm mountain gun M48 B-1)



ROUND 76 mm BLANK (SALUTE)

The round 76 mm BLANK (SALUTE) is intended for live fire simulation during manoeuvres, exercises and tactical operations.

It is used for gun salute.

The round consists of a cartridge case 76 mm M48 B-1 filled with propellant charge with igniter and a gun primer KT M71.

Calibre (mm)	76
Round length (mm)	max 320
Round mass (kg)	2
Muzzle safety (m)	min 100
Noise level (dB)	min 120
Powder	NC-01
Propellant charge mass (g)	120
Igniter (black powder N°7) mass (g)	30
Cartridge case mass (kg)	1.56
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 76 mm

(for 76 mm gun M42 - ZIS-3)

ROUND 76 mm WITH PROJECTILE HE M70 AND VARIABLE PROPELLANT CHARGE M70

The round 76 mm is separate loaded, with a high-explosive projectile M70 and a variable propellant charge M70.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles.

The projectile is filled with TNT explosive.

A fuze UTI M68P1 is screwed on the projectile.

The variable propellant charge M70 is initiated by a gun primer KT M71.

Calibre (mm)	76
Projectile muzzle velocity (m/s)	484
Mean maximum pressure of powder gases (bar)	≤ 1844
Maximum range (m)	10000
Projectile length, with fuze (mm)	345
Projectile mass, tabular (kg)	6.2
Explosive charge mass (kg)	0.61
Cartridge case length (mm)	385.3
Cartridge case mass (kg)	1.7
Propellant charge mass (kg)	0.466
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 76 mm

(for 76 mm gun M42 - ZIS-3)

ROUND 76 mm WITH SMOKE PROJECTILE M60 AND VARIABLE PROPELLANT CHARGE M70

The round 76 mm is separate loaded, with a smoke projectile M60 and a variable propellant charge M70.

It is intended for creating smoke screen on the battlefield.

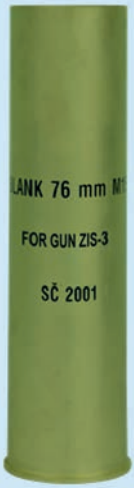
The projectile is filled with white phosphorus.

A fuze UTI M68P1 is screwed on the projectile.

The variable propellant charge M70 is initiated by a gun primer KT M71.

Calibre (mm)	76
Projectile muzzle velocity (m/s)	484
Mean maximum pressure of powder gases (bar)	≤ 1844
Maximum range (m)	10000
Projectile length, with fuze (mm)	345
Projectile mass, tabular (kg)	6.2
White phosphorus mass (kg)	0.53
Cartridge case length (mm)	385.3
Cartridge case mass (kg)	1.7
Propellant charge mass (kg)	0.466
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.



AMMUNITION 76 mm

(for 76 mm gun M42 - ZIS-3)

ROUND 76 mm BLANK (SALUTE)

The round 76 mm BLANK (SALUTE) is intended for live fire simulation during manoeuvres, exercises and tactical operations.

It is used for gun salute.

The round consists of a cartridge case 76 mm M72P1 filled with propellant charge with igniter and a gun primer KT M71.

Calibre (mm)	76
Round length (mm)	max 320
Round mass (kg)	1.91
Muzzle safety (m)	min 100
Noise level (dB)	min 120
Powder	NC-01
Propellant charge mass (g)	120
Igniter (black powder N°7) mass (g)	30
Cartridge case mass (kg)	1.56
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

AMMUNITION 100 mm

(for 100 mm tank gun D-10 on tank T-55, 100 mm self-propelled gun M44, 100 mm coastal gun M87)

ROUND 100 mm FIXED WITH PROJECTILE HE M63P2 AND FULL PROPELLANT CHARGE

The round 100 mm consists of an assembled brass cartridge case and a high-explosive projectile.

The projectile is filled with HAL-20 explosive.

A fuze UTIU M72B1 is screwed on the projectile.

The round is intended for direct and indirect firing on the personnel, light fortifications and unarmored and lightly armored vehicles.

Calibre (mm)	100
Projectile muzzle velocity (m/s)	900
Mean maximum pressure of powder gases (bar)	2942
Round length, with fuze (mm)	1095
Projectile length, with fuze (mm)	490
Cartridge case length (mm)	695
Round mass (kg)	30
Projectile mass (kg)	15.6
Propellant charge mass (kg)	5.5
Explosive charge mass (kg)	1.58
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 100 mm

(for 100 mm antitank guns T-12 and MT-12)

ROUND 100 mm FIXED WITH PROJECTILE HE M82 AND FULL PROPELLANT CHARGE

The round 100 mm is fixed, with a high-explosive projectile 100 mm M82 (filled with TNT).

The round consists of an assembled steel cartridge case and a high-explosive projectile.

A fuze UTIU M85P1 and a tracer N° 12 are screwed into the projectile.

The round is intended for direct and indirect firing of personnel, light fortifications and unarmored and lightly armored vehicles.

Calibre (mm)	100
Projectile muzzle velocity (m/s)	700
Mean maximum pressure of powder gases (bar)	1864
Round length, with fuze (mm)	1283
Projectile length, with fuze (mm)	674
Cartridge case length (mm)	913
Round mass (kg)	28.7
Projectile mass (kg)	16.7
Empty steel cartridge case mass (kg)	8.2
Explosive charge mass (kg)	2.2
Propellant charge mass (kg)	4.6
Tracer burning time (s)	4
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 100 mm

(for 100 mm antitank guns T-12 and MT-12)

ROUND 100 mm FIXED WITH HEAT-T M15

The round 100 mm is fixed, with 100 mm HEAT-T M15 projectile (filled with FO-4.5S explosive).

The round consists of an assembled steel cartridge case and a high-explosive antitank tracer (HEAT-T) projectile.

A fuze UT-PE M87P1 and a tracer № 12 are screwed into the projectile.

The 100 mm round is intended for antitank combat and demolition of facilities.

Calibre (mm)	100
Projectile muzzle velocity (m/s)	1075
Mean maximum pressure of powder gases (bar)	2157
Round length, with fuze (mm)	1284
Projectile length, with fuze (mm)	581
Cartridge case length (mm)	913
Round mass (kg)	22.5
Projectile mass (kg)	9.5
Empty steel cartridge case mass (kg)	8.2
Explosive charge mass (kg)	1
Propellant charge mass (kg)	4.6
Tracer burning time (s)	4
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 105 mm

(for 105 mm howitzers M56 and M2A1)

ROUND 105 mm WITH PROJECTILE HE M1 AND PROPELLANT CHARGE M2

The round 105 mm is separate loaded, with a high-explosive projectile M1 and a propellant charge M2.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles.

The projectile is filled with TNT explosive.

A fuze UTIU M02P1 is screwed on the projectile.

The full propellant charge M2 is in a brass cartridge case 105 mm M14 and is initiated by a gun primer KT M28A2.

Calibre (mm)	105
Projectile muzzle velocity (m/s)	491 (for M56), 472 (for M2A1)
Mean maximum pressure of powder gases (bar)	≤ 2305
Maximum range (m)	11600 (for M56), 11200 (for M2A1)
Projectile length, with fuze (mm)	496
Projectile mass, tabular (kg)	14.9
Explosive charge mass (kg)	2.11
Cartridge case length (mm)	371.856
Propellant charge mass (kg)	1.3
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 105 mm

(for 105 mm howitzer M56)

ROUND 105 mm WITH PROJECTILE HEER-BT M15 AND FULL VARIABLE PROPELLANT CHARGE M15A

The round 105 mm is separate loaded, with a high-explosive projectile M15 and a full variable propellant charge M15A.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles.

The projectile is filled with TNT explosive.

A fuze UTIU M02 is screwed on the projectile.

The full variable propellant charge M15A is in a brass cartridge case 105 mm M14 and is initiated by a gun primer KT M02.

Calibre (mm)	105
Projectile muzzle velocity (m/s)	645
Mean maximum pressure of powder gases (bar)	≤ 2500
Maximum range (m)	14500
Projectile length, with fuze (mm)	566.6
Projectile mass, tabular (kg)	13
Explosive charge mass (kg)	2.2
Cartridge case length (mm)	371.856
Propellant charge mass (kg)	2.3
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 105 mm

(for 105 mm howitzer M56)

ROUND 105 mm WITH PROJECTILE HEER-BB M15 AND FULL PROPELLANT CHARGE M15A

The round 105 mm is separate loaded, with a high-explosive projectile M15 and a full propellant charge M15A without increment charge.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles.

The projectile is filled with TNT explosive.

A fuze UTIU M02 is screwed on the projectile.

The full propellant charge M15A, without increment charge, is in a brass cartridge case 105 mm M14 and is initiated by a gun primer KT M02.

Calibre (mm)	105
Projectile muzzle velocity (m/s)	610
Mean maximum pressure of powder gases (bar)	≤ 2650
Maximum range (m)	16500
Projectile length, with fuze (mm)	565.7
Projectile mass, tabular (kg)	14.07
Explosive charge mass (kg)	2.2
Cartridge case length (mm)	371.856
Propelant charge mass (kg)	2.105
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 105 mm

(for 105 mm howitzers M56 and M2A1)

ROUND 105 mm WITH SMOKE PROJECTILE WP M60 AND PROPELLANT CHARGE M2

The round 105 mm is separate loaded, with a smoke projectile M60 and a propellant charge M2.

It is intended for creating smoke screen on the battlefield.

The projectile is filled with white phosphorus.

A fuze UTIU M02P1 is screwed on the projectile.

The full propellant charge M2 is in a brass cartridge case 105 mm M14 and is initiated by a gun primer KT M28A2.

Calibre (mm)	105
Projectile muzzle velocity (m/s)	491 (for M56), 472 (for M2A1)
Mean maximum pressure of powder gases (bar)	≤ 2305
Maximum range (m)	11600 (for M56), 11200 (for M2A1)
Projectile length, with fuze (mm)	496
Projectile mass, tabular (kg)	15.8
White phosphorus mass (kg)	1.7
Cartridge case length (mm)	371.856
Propellant charge mass (kg)	1.3
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 105 mm

(for 105 mm howitzers M56 and M2A1)

ROUND 105 mm WITH ILLUMINATING PROJECTILE M314A4 AND PROPELLANT CHARGE M2

The round 105 mm is separate loaded, with an illuminating projectile M314A4 and a propellant charge M2.

It is intended for illuminating the battlefield.

The projectile is assembled with an illuminating torch.

A fuze UTE M10 is screwed on the projectile and is timed with setter before firing the projectile.

The propellant charge M2 is in a brass cartridge case 105 mm M14 and is initiated by a gun primer KT M28A2.

Calibre (mm)	105
Projectile muzzle velocity (m/s)	461 (for M56), 443 (for M2A1)
Mean maximum pressure of powder gases (bar)	≤ 2305
Maximum range of illumination (m)	9200 (for M56), 9300 (for M2A1)
Projectile length, with fuze (mm)	487.8
Projectile mass, tabular (kg)	16.6
Flare composition mass (kg)	0.76
Light intensity (cd)	min 400000
Torch burning time (s)	min 30
Propelant charge mass (kg)	1.3
Operating temperature (°C)	-30 ÷ +50

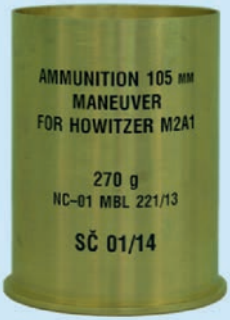
FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 105 mm

(for 105 mm howitzers M56 and M2A1)



ROUND 105 mm BLANK (SALUTE)

The round 105 mm BLANK (SALUTE) is intended for simulation of live firing during manoeuvres, exercises and tactical operations.

It is used for gun salute.

The round consists of a cartridge case 105 mm SALUTE filled with propellant charge with igniter and a gun primer KT M1.

Calibre (mm)	105
Round length (mm)	max 153
Round mass (kg)	2.4
Muzzle safety (m)	min 100
Noise level (dB)	min 100
Powder	NC-01
Propellant charge mass (g)	270
Igniter (black powder N°7) mass (g)	50
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

75

AMMUNITION 105 mm

(for 105 mm howitzer M56/33)

ROUND 105 mm WITH PROJECTILE HE M1 AND PROPELLANT CHARGE M2

The round 105 mm is separate loaded, with a high-explosive projectile M1 and a propellant charge M2.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles.

The projectile is filled with TNT explosive.

The fuze UTIU M02P1 is screwed on the projectile.

The full propellant charge M2 is in a brass cartridge case 105 mm M14 and is initiated by a gun primer KT M28A2.

Calibre (mm)	105
Projectile muzzle velocity (m/s)	507
Mean maximum pressure of powder gases (bar)	≤ 2305
Maximum range (m)	11900
Projectile length, with fuze (mm)	496
Projectile mass, tabular (kg)	14.9
Explosive charge mass (kg)	2.11
Cartridge case length (mm)	371.856
Propellant charge mass (kg)	1.3
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 105 mm

(for 105 mm howitzer M56/33)

ROUND 105 mm WITH SMOKE PROJECTILE WP M60 AND PROPELLANT CHARGE M2

The round 105 mm is separate loaded, with a smoke projectile M60 and a propellant charge M2.

It is intended for creating smoke screen on the battlefield.

The projectile is filled with white phosphorus.

A fuze UTIU M02P1 is screwed on the projectile.

The full propellant charge M2 is in a brass cartridge case 105 mm M14 and is initiated by gun primer KT M28A2.

Calibre (mm)	105
Projectile muzzle velocity (m/s)	507
Mean maximum pressure of powder gases (bar)	≤ 2305
Maximum range (m)	11900
Projectile length, with fuze (mm)	496
Projectile mass, tabular (kg)	15.8
White phosphorus mass (kg)	1.7
Cartridge case length (mm)	371.856
Propellant charge mass (kg)	1.3
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

75

AMMUNITION 105 mm

(for 105 mm howitzer M56/33)

ROUND 105 mm WITH PROJECTILE HEER-BT M15 AND FULL VARIABLE PROPELLANT CHARGE M15

The round 105 mm is separate loaded, with a high-explosive projectile M15 and a full variable propellant charge M15.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles.

The projectile is filled with TNT explosive.

A fuze UTIU M02 is screwed on the projectile.

The full variable propellant charge M15 is in a brass cartridge case 105 mm M14 and is initiated by a gun primer KT M02.

Calibre (mm)	105
Projectile muzzle velocity (m/s)	675
Mean maximum pressure of powder gases (bar)	≤ 2500
Maximum range (m)	15000
Projectile length, with fuze (mm)	566.6
Projectile mass, tabular (kg)	13
Explosive charge mass (kg)	2.2
Cartridge case length (mm)	371.856
Propellant charge mass (kg)	2.3
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 105 mm

(for 105 mm howitzer M56/33)

ROUND 105 mm WITH PROJECTILE HEER-BB M15 AND FULL PROPELLANT CHARGE M15

The round 105 mm is separate loaded, with a high-explosive projectile M15 and a full propellant charge M15.

It is intended for the destruction of personnel, light fortifications, unarmored and lightlly armored vehicles.

The projectile is filled with TNT explosive.

The fuze UTIU M02 is screwed on the projectile.

The full propellant charge M15 is in a brass cartridge case 105 mm M14 and is initiated by gun primer KT M02.

Calibre (mm)	105
Projectile muzzle velocity (m/s)	670
Mean maximum pressure of powder gases (bar)	≤ 2650
Maximum range (m)	18000
Projectile length, with fuze (mm)	565.7
Projectile mass, tabular (kg)	14.07
Explosive charge mass (kg)	2.2
Cartridge case length (mm)	371.856
Propellant charge mass (kg)	2.2
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 122 mm

(for 122 mm howitzers D-30, D-30J and SP 2S1)

ROUND 122 mm WITH PROJECTILE HE 462A1 AND FULL PROPELLANT CHARGE M78

The round 122 mm is separate loaded, with a high-explosive projectile 462A1 and a full propellant charge M78.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles.

The projectile is filled with TNT explosive.

A fuze UTIU M72B1 is screwed on the projectile.

The full propellant charge M78 is in a steel cartridge case 122 mm M78 or a brass cartridge case 122 mm M19 and is initiated by a gun primer KT M71.

Calibre (mm)	122
Projectile muzzle velocity (m/s)	690
Mean maximum pressure of powder gases (bar)	≤ 2450
Maximum range (m)	15000
Projectile length, with fuze (mm)	max 565
Projectile mass, tabular (kg)	21.76
Explosive charge mass (kg)	3.6
Cartridge case length (mm)	447
Cartridge case 122 mm mass (kg)	3.66 (for M78), 4.06 (for M19)
Propellant charge mass (kg)	3.8
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 122 mm

(for 122 mm howitzers D-30, D-30J and SP 2S1)

ROUND 122 mm WITH PROJECTILE HE 462A1 AND REDUCED VARIABLE PROPELLANT CHARGE M78

The round 122 mm is separate loaded, with a high-explosive projectile 462A1 and a reduced variable propellant charge M78.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles.

The projectile is filled with TNT explosive.

A fuze UTIU M72B1 is screwed on the projectile.

The reduced variable propellant charge M78 is in a steel cartridge case 122 mm M78 or a brass cartridge case 122 mm M19 and is initiated by a gun primer KT M71.

Calibre (mm)	122
Projectile muzzle velocity (m/s)	565
Mean maximum pressure of powder gases (bar)	≤ 2450
Maximum range (m)	12800
Projectile length, with fuze (mm)	max 565
Projectile mass, tabular (kg)	21.76
Explosive charge mass (kg)	3.6
Cartridge case length (mm)	447
Cartridge case 122 mm mass (kg)	3.66 (for M78), 4.06 (for M19)
Propellant charge mass (kg)	2.6
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 122 mm

(for 122 mm howitzers D-30, D-30J and SP 2S1)

ROUND 122 mm WITH PROJECTILE HEER M10 AND FULL VARIABLE PROPELLANT CHARGE M10

The round 122 mm is separate loaded, with a high-explosive projectile M10 and a full variable propellant charge M10.

It is intended for destruction or neutralization of personnel, light fortifications, unarmored and lightly armored vehicles, artillery and rocket batteries on location, command positions, towing convoys at rest or in motion.

The projectile is filled with HAL-20 and a fuze UTIU M02P1 is screwed on the projectile.

The full variable propellant charge M10 (it consists of a base charge M10 and an increment charge M10) is in a steel cartridge case 122 mm M78 and is initiated by a gun primer KT M71.

Calibre (mm)	122
Projectile muzzle velocity (m/s)	745
Mean maximum pressure of powder gases (bar)	≤ 2450
Maximum range (m)	18300
Projectile length, with fuze (mm)	max 658
Projectile mass, tabular (kg)	20.2
Explosive charge mass (kg)	3.78
Cartridge case length (mm)	447
Cartridge case mass (kg)	3.66
Propellant charge mass (kg)	4.16
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 122 mm

(for 122 mm howitzers D-30, D-30J and SP 2S1)

ROUND 122 mm WITH PROJECTILE HEER-BB M10 AND BASE PROPELLANT CHARGE M10

The round 122 mm is separate loaded, with a high-explosive projectile M10 (of extended range, with base-bleed mechanism) and a base propellant charge M10.

It is intended for destruction or neutralization of personnel, light fortifications, unarmored and lightly armored vehicles, artillery and rocket batteries on location, command positions, towing convoys at rest or in motion.

The projectile is filled with HAL-20 and a fuze UTIU M02P1 is screwed on the projectile.

The base propellant charge M10 is in a steel cartridge case 122 mm M78 and is initiated by a gun primer KT M71.

Calibre (mm)	122
Projectile muzzle velocity (m/s)	715
Mean maximum pressure of powder gases (bar)	≤ 2450
Maximum range (m)	21100
Projectile length, with fuze (mm)	max 658
Projectile mass, tabular (kg)	21.7
Explosive charge mass (kg)	3.78
Cartridge case length (mm)	447
Cartridge case mass (kg)	3.66
Propellant charge mass (kg)	3.95
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 122 mm

(for 122 mm howitzers D-30, D-30J and SP 2S1)

ROUND 122 mm WITH PROJECTILE WP M60 AND FULL PROPELLANT CHARGE M78

The round 122 mm is separate loaded, with a smoke projectile M60 and a full propellant charge M78.

It is intended for creating smoke screen on the battlefield.

The projectile is filled with white phosphorus.

A fuze UTIU M72B1 is screwed on the projectile.

The full propellant charge M78 is in a steel cartridge case 122 mm M78 or a brass cartridge case 122 mm M19 and is initiated by a gun primer KT M71.

Calibre (mm)	122
Projectile muzzle velocity (m/s)	690
Mean maximum pressure of powder gases (bar)	≤ 2450
Maximum range (m)	15000
Projectile length, with fuze (mm)	max 565
Projectile mass, tabular (kg)	21.76
White phosphorus mass (kg)	2.95
Cartridge case length (mm)	447
Cartridge case 122 mm mass (kg)	3.66 (for M78), 4.06 (for M19)
Propellant charge mass (kg)	3.8
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 122 mm

(for 122 mm howitzers D-30, D-30J and SP 2S1)

ROUND 122 mm WITH PROJECTILE WP M60 AND REDUCED VARIABLE PROPELLANT CHARGE M78

The round 122 mm is separate loaded, with a smoke projectile M60 and a reduced variable propellant charge M78.

It is intended for creating smoke screen on the battlefield.

The projectile is filled with white phosphorus.

A fuze UTIU M72B1 is screwed on the projectile.

The reduced variable propellant charge M78 is in a steel cartridge case 122 mm M78 or a brass cartridge case 122 mm M19 and is initiated by a gun primer KT M71.

Calibre (mm)	122
Projectile muzzle velocity (m/s)	565
Mean maximum pressure of powder gases (bar)	≤ 2450
Maximum range (m)	12800
Projectile length, with fuze (mm)	max 565
Projectile mass, tabular (kg)	21.76
White phosphorus mass (kg)	2.95
Cartridge case length (mm)	447
Cartridge case 122 mm mass (kg)	3.66 (for M78), 4.06 (for M19)
Propellant charge mass (kg)	2.6
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 122 mm

(for 122 mm howitzers D-30, D-30J and SP 2S1)

ROUND 122 mm WITH ILLUMINATING PROJECTILE S-463 AND FULL PROPELLANT CHARGE M78

The round 122 mm is separate loaded, with an illuminating projectile S-463 and a full propellant charge M78.

It is intended for illuminating the battlefield.

The projectile is assembled with an illuminating torch.

A fuze UTE M10 is screwed on the projectile and is timed with UTIF device (setter) before firing the projectile.

The full propellant charge M78 is in a steel cartridge case 122 mm M78 or a brass cartridge case 122 mm M19 and is initiated by a gun primer KT M71.

Calibre (mm)	122
Projectile muzzle velocity (m/s)	687
Mean maximum pressure of powder gases (bar)	≤ 2450
Maximum range of illumination (m)	15200
Projectile length, with fuze (mm)	max 516
Projectile mass, tabular (kg)	22.175
Light intensity (cd)	min 700000
Torch burning time (s)	min 55
Propellant charge mass (kg)	3.8
Cartridge case 122 mm mass (kg)	3.66 (for M78), 4.06 (for M19)
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 122 mm

(for 122 mm howitzers D-30, D-30J and SP 2S1)

ROUND 122 mm WITH ILLUMINATING PROJECTILE S-463 AND REDUCED VARIABLE PROPELLANT CHARGE M78

The round 122 mm is separate loaded, with an illuminating projectile S-463 and a reduced variable propellant charge M78.

It is intended for illuminating the battlefield.

The projectile is assembled with an illuminating torch.

A fuze UTE M10 is screwed on the projectile and is timed with UTIF device (setter) before firing the projectile.

The reduced variable propellant charge M78 is in a steel cartridge case 122 mm M78 or a brass cartridge case 122 mm M19 and is initiated by a gun primer KT M71.

Calibre (mm)	122
Projectile muzzle velocity (m/s)	562
Mean maximum pressure of powder gases (bar)	≤ 2450
Maximum range of illumination (m)	12400
Projectile length, with fuze (mm)	max 516
Projectile mass, tabular (kg)	22.175
Light intensity (cd)	min 700000
Torch burning time (s)	min 55
Propellant charge mass (kg)	2.6
Cartridge case 122 mm mass (kg)	3.66 (for M78), 4.06 (for M19)
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 122 mm

(for 122 mm howitzers D-30, D-30J and SP 2S1)

ROUND 122 mm BLANK (SALUTE)

The round 122 mm BLANK (SALUTE) is intended for simulation of live firing during manoeuvres, exercises and tactical operations.

It is used for gun salute.

The round consists of a cartridge case 122 mm M78 filled with propellant charge with igniter and a gun primer KT M71.

Calibre (mm)	122
Round length (kg)	max 447
Round mass (kg)	4.41
Muzzle safety (m)	min 100
Noise level (dB)	min 100
Powder	NC-01
Propellant charge mass (g)	350
Igniter (black powder N°7) mass (g)	50
Cartridge case mass (kg)	3.66
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 125 mm

(for 125 mm gun D-81 on tanks M84 or T-72)

ROUND 125 mm WITH PROJECTILE HE M86P2

The round 125 mm is separately loaded, with a high-explosive projectile M86P2 and a base propellant charge M88.

It is intended for direct and indirect firing of personnel, light fortifications, non-armored or lightly armored vehicles.

The projectile is assembled with HAL-20 explosive.

A fuze UTIU M85P1 is screwed on the projectile and it can be adjusted to superquick or delay action.

The base propellant charge M88 is with a combustible sabot and a short steel cartridge case and is activated by an electro-shock primer KT-EU M84.

Calibre (mm)	125
Projectile muzzle velocity (m/s)	850
Mean maximum pressure of powder gases (bar)	≤ 3432
Maximum range (m)	12200
Projectile length, with fuze (mm)	674
Projectile mass, tabular (kg)	23
Explosive charge mass (kg)	3.28
Base propellant charge mass (kg)	9.5
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 125 mm

(for 125 mm gun D-81 on tanks M84 or T-72)

ROUND 125 mm WITH SUBCALIBER PROJECTILE APFSDS-T M88

The round 125 mm is separately loaded, with a subcaliber-tracer projectile APFSDS-T M88 with core and a base propellant charge M88.

It is intended for actions against tanks, self-propelled artillery weapons and other armored targets.

A tracer № 13 is screwed on the projectile.

The base propellant charge M88 is with a combustible sabot and a short steel cartridge case and is activated by an electro-shock primer KT-EU M84.

Calibre (mm)	125
Projectile muzzle velocity (m/s)	1785
Mean maximum pressure of powder gases (bar)	≤ 4590
Maximum effective range (m)	4000
Projectile length (mm)	591
Bullet mass, tabular (kg)	5.86
Projectile mass, tabular (kg)	3.807
Projectile penetration (mm)	254
Increment charge mass (kg)	4.14
Tracer burning time (s)	2
Base propellant charge mass (kg)	9.5
Operating temperature (°C)	-30 ÷ +50

Sloboda

75

AMMUNITION 125 mm

**(for 125 mm gun D-81
on tanks M84 or T-72)**

ROUND 125 mm WITH PROJECTILE HEAT-T M88P1

The round 125 mm is separately loaded, with a projectile HEAT-T M88P1 and a base propellant charge M88.

It is intended for antitank combat and demolition of buildings.

The projectile is assembled with FO-4.5 explosive.

A fuze UT-PE M87P1 (upper and lower), which is mechanical and piezoelectric, and a tracer N° 12 are screwed on the projectile.

The base propellant charge M88 is with a combustible sabot and a short steel cartridge case and is activated by an electro-shock primer KT-EU M84.

Calibre (mm)	125
Projectile muzzle velocity (m/s)	905
Mean maximum pressure of powder gases (bar)	≤ 2942
Maximum effective range (m)	4000
Projectile length, with fuze (mm)	678
Projectile mass, tabular (kg)	19
Explosive charge mass (kg)	≈ 2
Projectile penetration (mm)	400
Tracer burning time (s)	4
Base propellant charge mass (kg)	9.5
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 125 mm

(for 125 mm gun D-81 on tanks M84 or T-72)

ROUND 125 mm WITH TRAINING PROJECTILE HEAT-T M17

The round 125 mm with training projectile HEAT-T M17 is intended for conducting training for antiarmor combat by direct firing from a tank gun 125 mm.

A tracer N° 12 is screwed on the projectile.

The base propellant charge M88 is with a combustible sabot and a short steel cartridge case and is activated by electro-impact primer KT-EU M84.

Calibre (mm)	125
Projectile muzzle velocity (m/s)	905
Mean maximum pressure of powder gases (bar)	≤ 2942
Maximum effective range (m)	4000
Projectile length (mm)	678
Projectile mass, tabular (kg)	19
Tracer burning time (s)	4
Base propellant charge mass (kg)	9.5
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 130 mm

(for 130 mm gun M46)

ROUND 130 mm WITH PROJECTILE HE M79 AND FULL VARIABLE PROPELLANT CHARGE M46

The round 130 mm is separately loaded, with a high-explosive projectile M79 and a full variable propellant charge M46.

It is intended for destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is assembled with TNT explosive.

A fuze UTIU M72B1 is screwed on the projectile and it can be adjusted to superquick or delay action.

The full variable propellant charge M46 is activated by a gun primer KT M71.

Calibre (mm)	130
Projectile muzzle velocity (m/s)	930
Mean maximum pressure of powder gases (bar)	≤ 3090
Maximum range (m)	27400
Projectile length, with fuze (mm)	674
Projectile mass, tabular (kg)	33.4
Explosive charge mass (kg)	3.67
Cartridge case length (mm)	846
Cartridge case mass (kg)	11.35
Propellant charge mass (kg)	13.5
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

75

AMMUNITION 130 mm

(for 130 mm gun M46)

ROUND 130 mm WITH PROJECTILE HE M79 AND REDUCED VARIABLE PROPELLANT CHARGE M46

The round 130 mm is separately loaded, with a high-explosive projectile M79 and a reduced variable propellant charge M46.

It is intended for destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is assembled with TNT explosive.

A fuze UTIU M72B1 is screwed on the projectile and it can be adjusted to superquick or delay action.

The reduced variable propellant charge M46 is activated by a gun primer KT M71.

Calibre (mm)	130
Projectile muzzle velocity (m/s)	705
Mean maximum pressure of powder gases (bar)	≤ 2648
Maximum range (m)	19000
Projectile length, with fuze (mm)	674
Projectile mass, tabular (kg)	33.4
Explosive charge mass (kg)	3.67
Cartridge case length (mm)	846
Cartridge case mass (kg)	11.35
Propellant charge mass (kg)	6.75
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 130 mm

(for 130 mm gun M46)

ROUND 130 mm WITH PROJECTILE HE M93 WITH BASE-BLEED AND FULL PROPELLANT CHARGE M93A

The round 130 mm is separately loaded, with a high-explosive projectile M93 with base-bleed and a full propellant charge M93A.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is assembled with TNT explosive.

A fuze UTIU M72B1 is screwed on the projectile and it can be adjusted to superquick or delay action.

The full propellant charge M93A is activated by a gun primer KT M71.

Calibre (mm)	130
Projectile muzzle velocity (m/s)	885
Mean maximum pressure of powder gases (bar)	≤ 3080
Maximum range (m)	31100
Projectile length, with fuze (mm)	≈ 756
Projectile mass (kg)	36.95
Explosive charge mass (kg)	≈ 3.64
Cartridge case length (mm)	846
Cartridge case mass (kg)	11.35
Propellant charge mass (kg)	12.6
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 152 mm

(for 152 mm gun-howitzer D-20 and 152 mm gun-howitzer M1937)

ROUND 152 mm WITH PROJECTILE HE M88 AND FULL VARIABLE PROPELLANT CHARGE M77

The round 152 mm is separately loaded, with a high-explosive projectile M88 and a full variable propellant charge M77.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is assembled with TNT.

A fuze UTIU M72B1 is screwed on the projectile and it can be adjusted to instant or delay action,.

The full variable propellant charge M77 is activated by a gun primer KT M71.

Calibre (mm)	152
Projectile muzzle velocity (m/s)	655
Mean maximum pressure of powder gases (bar)	≤ 2305
Maximum range (m)	17400
Projectile length, with fuze (mm)	max 710
Projectile mass, tabular (kg)	43.56
Explosive charge mass (kg)	5.94
Cartridge case length (mm)	max 547.5
Cartridge case mass (kg)	7.5
Propellant charge mass (kg)	8.57
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 152 mm

(for 152 mm gun-howitzer D-20 and 152 mm gun-howitzer M1937)

ROUND 152 mm WITH PROJECTILE HE M88 AND REDUCED VARIABLE PROPELLANT CHARGE M77

The round 152 mm is separately loaded, with a high-explosive projectile M88 and a reduced variable propellant charge M77.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is assembled with TNT.

A fuze UTIU M72B1 is screwed on the projectile and it can be adjusted to instant or delay action.

The reduced variable propellant charge M77 is activated by a gun primer KT M71.

Calibre (mm)	152
Projectile muzzle velocity (m/s)	511
Mean maximum pressure of powder gases (bar)	≤ 2059
Maximum range (m)	13400
Projectile length, with fuze (mm)	max 710
Projectile mass, tabular (kg)	43.56
Explosive charge mass (kg)	5.94
Cartridge case length (mm)	max 547.5
Cartridge case mass (kg)	7.5
Propellant charge mass (kg)	4.19
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 155 mm

(for 155 mm howitzers M109/M126A1, M109A1/M185 and M198/M199)

ROUND 155 mm WITH PROJECTILE HE M107 AND PROPELLANT CHARGE M3A1

The round 155 mm is separate loaded, with a high-explosive projectile M107 and a propellant charge M3A1.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is filled with TNT explosive.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge M3A1 is activated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	375 (M109/M126A1), 375 (M109A1/M185), 380 (M198/M199)
Mean maximum pressure of powder gases (bar)	≤ 1593 (M109/M126A1), ≤ 1062 (M109A1/M185)
Maximum range (m)	9803 (M109/M126A1), 9800 (M109A1/M185), 9800 (M198/M199)
Projectile length, with fuze (mm)	702
Projectile mass, tabular (kg)	43.1
Explosive charge mass (kg)	6.72
Propellant charge mass (kg)	2.68
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 155 mm

(for 155 mm howitzers M109/M126A1, M109A1/M185 and M198/M199)

ROUND 155 mm WITH PROJECTILE HE M107 AND PROPELLANT CHARGE M4A2

The round 155 mm is separate loaded, with a high-explosive projectile M107 and a propellant charge M4A2.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is filled with TNT explosive.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge M4A2 is activated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	562 (M109/M126A1), 565 (M109A1/M185), 574 (M198/M199)
Mean maximum pressure of powder gases (bar)	≤ 2495 (M109/M126A1), ≤ 1730 (M109A1/M185)
Maximum range (m)	14600 (M109/M126A1), 14800 (M109A1/M185), 15030 (M198/M199)
Projectile length, with fuze (mm)	702
Projectile mass, tabular (kg)	43.1
Explosive charge mass (kg)	6.72
Propellant charge mass (kg)	6.4
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 155 mm

(for 155 mm howitzers M109A1/M185 and M198/M199)

ROUND 155 mm WITH PROJECTILE HE M107 AND PROPELLANT CHARGE M119A1

The round 155 mm is separate loaded, with a high-explosive projectile M107 and a propellant charge M119A1.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is filled with TNT explosive.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge M119A1 is activated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	684 (M109A1/M185), 690 (M198/M199)
Mean maximum pressure of powder gases (bar)	≤ 2060 (M109A1/M185), ≤ 2170 (M198/M199)
Maximum range (m)	18100 (M109A1/M185), 18270 (M198/M199)
Projectile length, with fuze (mm)	702
Projectile mass, tabular (kg)	43.1
Explosive charge mass (kg)	6.72
Propellant charge mass (kg)	9
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

ARTILLERY RESOURCES

75

AMMUNITION 155 mm

(for 155 mm howitzers M109/M126A1, M109A1/M185 and M198/M199)

ROUND 155 mm WITH PROJECTILE WP M110A2 AND PROPELLANT CHARGE M3A1

The round 155 mm is separate loaded, with a projectile WP M110A2 and a propellant charge M3A1.

It is intended to create smoke screen on the battlefield with white phosphorus.

The projectile is filled with white phosphorus.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge M3A1 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	374.9 (M109/M126A1), 374.9 (M109A1/M185), 380.1
Mean maximum pressure of powder gases (bar)	≤ 1593 (M109/M126A1), ≤ 1062 (M109A1/M185)
Maximum range (m)	9800 (M109/M126A1), 9800 (M109A1/M185), 9800 (M198/M199)
Projectile length, with fuze (mm)	702.5
Projectile mass, tabular (kg)	44.17
White phosphorus mass (kg)	7.1
Propellant charge mass (kg)	2.68
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 155 mm

(for 155 mm howitzers M109/M126A1, M109A1/M185 and M198/M199)

ROUND 155 mm WITH PROJECTILE WP M110A2 AND PROPELLANT CHARGE M4A2

The round 155 mm is separate loaded, with a projectile WP M110A2 and a propellant charge M4A2.

It is intended to create smoke screen on the battlefield with white phosphorus.

The projectile is filled with white phosphorus.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge M4A2 is activated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	562.4 (M109/M126A1), 565.4 (M109A1/M185), 574.3
Mean maximum pressure of powder gases (bar)	≤ 2495 (M109/M126A1), ≤ 1730 (M109A1/M185)
Maximum range (m)	14600 (M109/M126A1), 14800 (M109A1/M185), 14800
Projectile length, with fuze (mm)	702.5
Projectile mass, tabular (kg)	44.17
White phosphorus mass (kg)	7.1
Propellant charge mass (kg)	6.4
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 155 mm

(for 155 mm howitzers M109A1/M185 and M198/M199)

ROUND 155 mm WITH PROJECTILE WP M110A2 AND PROPELLANT CHARGE M119A1

The round 155 mm is separate loaded, with a projectile WP M110A2 and a propellant charge M119A1.

It is intended to create smoke screen on the battlefield with white phosphorus.

The projectile is filled with white phosphorus.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge M119A1 is activated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	684 (M109A1/M185), 690 (M198/M199)
Mean maximum pressure of powder gases (bar)	≤ 2060 (M109A1/M185), ≤ 2170 (M198/M199)
Maximum range (m)	18100 (M109A1/M185), 18270 (M198/M199)
Projectile length, with fuze (mm)	702.5
Projectile mass, tabular (kg)	44.17
White phosphorus mass (kg)	7.1
Propellant charge mass (kg)	9
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 155 mm

(for 155 mm howitzers M109/M126A1, M109A1/M185 and M198/M199)

ROUND 155 mm WITH ILLUMINATING PROJECTILE M485A2 AND PROPELLANT CHARGE M3A1

The round 155 mm is separate loaded, with an illuminating projectile M485A2 and a propellant charge M3A1.

It is intended for illuminating the battlefield.

The projectile is assembled with an illuminating torch.

An electronic time fuze UTE M10 is screwed on the projectile and it is timed with UTIF device (setter) before firing the projectile.

The propellant charge M3A1 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	385 (M109/M126A1), 381.7 (M109A1/M185), 380.1 (M198/M199)
Mean maximum pressure of powder gases (bar)	≤ 1593 (M109/M126A1), ≤ 1062 (M109A1/M185)
Maximum range of illumination (m)	9000 (M109/M126A1), 9000 (M109A1/M185), 10300 (M198/M199)
Projectile length, with fuze (mm)	701
Projectile mass, tabular (kg)	41.8
Illuminating composition mass (kg)	2.63
Light intensity (cd)	1000000
Torch burning time (s)	≈ 120
Propellant charge mass (kg)	2.68
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 155 mm

(for 155 mm howitzers M109/M126A1, M109A1/M185 and M198/M199)

ROUND 155 mm WITH ILLUMINATING PROJECTILE M485A2 AND PROPELLANT CHARGE M4A2

The round 155 mm is separate loaded, with an illuminating projectile M485A2 and a propellant charge M4A2.

It is intended for illuminating the battlefield.

The projectile is assembled with an illuminating torch.

An electronic time fuze UTE M10 is screwed on the projectile and it is timed with UTIF device (setter) before firing the projectile.

The propellant charge M4A2 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	576.5 (M109/M126A1), 576.5 (M109A1/M185), 574.3 (M198/M199)
Mean maximum pressure of powder gases (bar)	≤ 2495 (M109/M126A1), ≤ 1730 (M109A1/M185)
Maximum range of illumination (m)	14000 (M109/M126A1), 14000 (M109A1/M185), 14500 (M198/M199)
Projectile length, with fuze (mm)	701
Projectile mass, tabular (kg)	41.8
Illuminating composition mass (kg)	2.63
Light intensity (cd)	1000000
Torch burning time (s)	≈ 120
Propellant charge mass (kg)	6.4
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 155 mm

(for 155 mm howitzers M109A1/M185 and M198/M199)

ROUND 155 mm WITH ILLUMINATING PROJECTILE M485A2 AND PROPELLANT CHARGE M119A1

The round 155 mm is separate loaded, with an illuminating projectile M485A2 and a propellant charge M119A1.

It is intended for illuminating the battlefield.

The projectile is assembled with an illuminating torch.

An electronic time fuze UTE M10 is screwed on the projectile and it is timed with UTIF device (setter) before firing the projectile.

The propellant charge M119A1 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	697 (M109A1/M185), 684 (M198/M199)
Mean maximum pressure of powder gases (bar)	≤ 2060 (M109A1/M185), ≤ 2170 (M198/M199)
Maximum range of illumination (m)	17500 (M109A1/M185), 18400 (M198/M199)
Projectile length, with fuze (mm)	701
Projectile mass, tabular (kg)	41.8
Illuminating composition mass (kg)	2.63
Light intensity (cd)	1000000
Torch burning time (s)	≈ 120
Propellant charge mass (kg)	9
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 155 mm

(for 155 mm self-propelled gun-howitzer NORA-B52 M15)

ROUND 155 mm WITH PROJECTILE HE M101 AND PROPELLANT CHARGE MC ZONE 9

The round 155 mm is separate loaded, with a high-explosive projectile M101 and a propellant charge MC zone 9.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is assembled with TNT.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge MC zone 9 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	840
Mean maximum pressure of powder gases (bar)	≤ 2500
Maximum range (m)	23000
Projectile length, with fuze (mm)	702
Projectile mass, tabular (kg)	43.25
Explosive charge mass (kg)	6.9
Propellant charge mass (kg)	14
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 155 mm

(for 155 mm self-propelled gun-howitzer NORA-B52 M15)

ROUND 155 mm WITH PROJECTILE HE M107 AND PROPELLANT CHARGE MC ZONE 8

The round 155 mm is separate loaded, with a high-explosive projectile M107 and a propellant charge MC zone 8.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is assembled with TNT.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge MC zone 8 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	690
Mean maximum pressure of powder gases (bar)	≤ 1900
Maximum range (m)	18400
Projectile length, with fuze (mm)	702
Projectile mass, tabular (kg)	43.1
Explosive charge mass (kg)	6.72
Propellant charge mass (kg)	9.4
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

AMMUNITION 155 mm

(for 155 mm self-propelled gun-howitzer NORA-B52 M15)

ROUND 155 mm WITH PROJECTILE HEER-BT M19 AND PROPELLANT CHARGE MC ZONE 9

The round 155 mm is separate loaded, with a high-explosive extended range projectile M19 with boat tail and a propellant charge MC zone 9.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is assembled with TNT.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge MC zone 9 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	840
Mean maximum pressure of powder gases (bar)	≤ 2700
Maximum range (m)	25600
Projectile length, with fuze (mm)	937.28
Projectile mass, tabular (kg)	43.8
Explosive charge mass (kg)	9.7
Propellant charge mass (kg)	14
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 155 mm

(for 155 mm self-propelled gun-howitzer NORA-B52 M15)

ROUND 155 mm WITH PROJECTILE HEER-BT M19 AND PROPELLANT CHARGE MC ZONE 10

The round 155 mm is separate loaded, with a high-explosive extended range projectile M19 with boat tail and a propellant charge MC zone 10.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is assembled with TNT.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge MC zone 10 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	930
Mean maximum pressure of powder gases (bar)	≤ 3300
Maximum range (m)	29000
Projectile length, with fuze (mm)	937.28
Projectile mass, tabular (kg)	43.8
Explosive charge mass (kg)	9.7
Propellant charge mass (kg)	17
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 155 mm

(for 155 mm self-propelled gun-howitzer NORA-B52 M15)

ROUND 155 mm WITH PROJECTILE HEER-BB M19 AND PROPELLANT CHARGE MC ZONE 9

The round 155 mm is separate loaded, with a high-explosive extended range projectile with base-bleed mechanism M19 and a propellant charge MC zone 9.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is assembled with TNT.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge MC zone 9 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	825
Mean maximum pressure of powder gases (bar)	≤ 2700
Maximum range (m)	31000
Projectile length, with fuze (mm)	937.28
Projectile mass, tabular (kg)	47.1
Explosive charge mass (kg)	9.7
Propellant charge mass (kg)	14
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

Sloboda

ARTILLERY RESOURCES

75

AMMUNITION 155 mm

(for 155 mm self-propelled gun-howitzer NORA-B52 M15)

ROUND 155 mm WITH PROJECTILE HEER-BB M19 AND PROPELLANT CHARGE MC ZONE 10

The round 155 mm is separate loaded, with a high-explosive extended range projectile with base-bleed mechanism M19 and a propellant charge MC zone 10.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is assembled with TNT.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge MC zone 10 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	925
Mean maximum pressure of powder gases (bar)	≤ 3300
Maximum range (m)	38000
Projectile length, with fuze (mm)	937.28
Projectile mass, tabular (kg)	47.1
Explosive charge mass (kg)	9.7
Propellant charge mass (kg)	17
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 155 mm

(for 155 mm self-propelled gun-howitzer NORA-B52 M15)

ROUND 155 mm WITH PROJECTILE HE ERFB M03 AND PROPELLANT CHARGE MC ZONE 9

The round 155 mm is separate loaded, with a high-explosive extended range projectile M03 with boat tail and a propellant charge MC zone 9.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is assembled with TNT.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge MC zone 9 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	820
Mean maximum pressure of powder gases (bar)	≤ 2700
Maximum range (m)	26600
Projectile length, with fuze (mm)	937.28
Projectile mass, tabular (kg)	45.5
Explosive charge mass (kg)	8.1
Propellant charge mass (kg)	14
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 155 mm

(for 155 mm self-propelled gun-howitzer NORA-B52 M15)

ROUND 155 mm WITH PROJECTILE HE ERFB M03 AND PROPELLANT CHARGE MC ZONE 10

The round 155 mm is separate loaded, with a high-explosive extended range projectile M03 with boat tail and a propellant charge MC zone 10.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is assembled with TNT.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge MC zone 10 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	920
Mean maximum pressure of powder gases (bar)	≤ 2700
Maximum range (m)	32200
Projectile length, with fuze (mm)	937.28
Projectile mass, tabular (kg)	45.5
Explosive charge mass (kg)	8.1
Propellant charge mass (kg)	17
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 155 mm

(for 155 mm self-propelled gun-howitzer NORA-B52 M15)

ROUND 155 mm WITH PROJECTILE HE ERFB-BB M03 AND PROPELLANT CHARGE MC ZONE 9

The round 155 mm is separate loaded, with a high-explosive extended range projectile with base-bleed mechanism M03 and a propellant charge MC zone 9.

It is intended for the destruction of personnel, light fortifications, unarmored and light-armored vehicles, etc.

The projectile is assembled with TNT.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge MC zone 9 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	820
Mean maximum pressure of powder gases (bar)	≤ 2700
Maximum range (m)	31600
Projectile length, with fuze (mm)	937.28
Projectile mass, tabular (kg)	47.6
Explosive charge mass (kg)	8.1
Propellant charge mass (kg)	14
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 155 mm

(for 155 mm self-propelled gun-howitzer NORA-B52 M15)

ROUND 155 mm WITH PROJECTILE HE ERFB-BB M03 AND PROPELLANT CHARGE MC ZONE 10

The round 155 mm is separate loaded, with a high-explosive extended range projectile with base-bleed mechanism M03 and a propellant charge MC zone 10.

It is intended for the destruction of personnel, light fortifications, unarmored and lightly armored vehicles, etc.

The projectile is assembled with TNT.

A fuze UTIU M02P1 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge MC zone 10 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	925
Mean maximum pressure of powder gases (bar)	≤ 3300
Maximum range (m)	41000
Projectile length, with fuze (mm)	937.28
Projectile mass, tabular (kg)	47.6
Explosive charge mass (kg)	8.1
Propellant charge mass (kg)	17
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

AMMUNITION 155 mm

(for 155 mm self-propelled gun-howitzer NORA-B52 M15)

ROUND 155 mm WITH PROJECTILE ERFB WP M09 AND PROPELLANT CHARGE MC ZONE 9

The round 155 mm is separate loaded, with an extended range projectile WP M09 and a propellant charge MC zone 9.

It is intended for creating smoke screen on the battlefield with white phosphorus.

The projectile is filled with white phosphorus.

A fuze UTIU M02 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge MC zone 9 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	820
Mean maximum pressure of powder gases (bar)	≤ 2700
Maximum range (m)	26600
Projectile length, with fuze (mm)	937.28
Projectile mass, tabular (kg)	45.5
White phosphorus mass (kg)	8.7
Propellant charge mass (kg)	14
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

AMMUNITION 155 mm

(for 155 mm self-propelled gun-howitzer NORA-B52 M15)

ROUND 155 mm WITH PROJECTILE ERFB WP M09 AND PROPELLANT CHARGE MC ZONE 10

The round 155 mm is separate loaded, with an extended range projectile WP M09 and a propellant charge MC zone 10.

It is intended for creating smoke screen on the battlefield with white phosphorus.

The projectile is filled with white phosphorus.

A fuze UTIU M02 is screwed on the projectile and it can be set to superquick or delay action.

The propellant charge MC zone 10 is initiated by a gun primer KT M82P2.

Calibre (mm)	155
Projectile muzzle velocity (m/s)	920
Mean maximum pressure of powder gases (bar)	≤ 3300
Maximum range (m)	32200
Projectile length, with fuze (mm)	937.28
Projectile mass, tabular (kg)	45.5
White phosphorus mass (kg)	8.7
Propellant charge mass (kg)	17
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

FUZES

FUZE UTI M68P1

The fuze UTI M68P1 is superquick-inertia fuze.
It is intended for the assembling the HE projectiles in caliber 76 mm.
The fuze with cap is safe for firing in snow and rain.
It is safe in all conditions of transportation and handling.

Action type	superquick
Total height of fuze (mm)	≈ 102.4
Depth of fuze intrusion (mm)	max 56.55
Muzzle safety (m)	min 10
Ready to act - armed (m)	max 140
Safety - mechanical, centrifugal, pyrotechnic (ms)	100 ÷ 200
Arming during axial acceleration (m/s^2)	24000 ÷ 230000
Rotation (min^{-1})	min 3100
Fuze mass (kg)	0.358
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

FUZE UTIU M85P1

The fuze UTIU M85P1 is mechanical, point-detonating fuze located at the nose, with superquick, inertia and delay action.

It is intended for the assembling the HE non-rotating projectiles in calibers 100 mm, 115 mm and 125 mm for 100 mm antitank guns T-12 or MT-12 and for tank guns 115 mm or 125 mm D-81.

It can be set at superquick and delay action.

The fuze with cap is safe for firing in snow and rain.

It is safe in all conditions of transportation and handling.

Action type (setting)	superquick, delay
Total height of fuze (mm)	max 105.71
Depth of fuze intrusion (mm)	max 46.8
Delay time - delay action (ms)	27 ÷ 55
Muzzle safety (m)	min 10
Ready to act - armed (m)	max 100
Safety - mechanical, pyrotechnic (ms)	100 ÷ 200
Arming during axial acceleration (m/s^2)	min 30000 to max 230000
Fuze mass (kg)	0.41
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

FUZES

FUZE UTIU M72B1

The fuze UTIU M72B1 is mechanical, point-detonating fuze located at the nose, with superquick, inertia and delay action (it can be set at superquick and delay action).

It is intended for the assembling the HE projectiles in calibers 85 mm, 100 mm, 122 mm, 130 mm and 152 mm for guns and howitzers.

The fuze with cap is safe for firing in snow and rain.

It is safe in all conditions of transportation and handling.

Action type (setting)	superquick, delay
Total height of fuze (mm)	max 105.71
Depth of fuze intrusion (mm)	max 46.8
Delay time - delay action (ms)	20 ÷ 50
Muzzle safety (m)	min 10
Ready to act - armed (m)	max 200
Safety - mechanical, centrifugal, pyrotechnic (ms)	100 ÷ 200
Arming during axial acceleration (m/s^2)	24000 ÷ 230000
Rotation (min^{-1})	min 3100
Muzzle velocity (m/s)	max 1100
Fuze mass (kg)	0.42
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

FUZE UTIU M72B2

The fuze UTIU M72B2 is mechanical, point-detonating fuze located at the nose, with superquick, inertia and delay action (it can be set at superquick and delay action).

It is intended for the assembling the HE projectiles in calibers 85 mm, 100 mm, 122 mm, 130 mm and 152 mm for guns and howitzers.

The fuze with cap is safe for firing in snow and rain.

It is safe in all conditions of transportation and handling.

Action type (setting)	superquick, delay
Total height of fuze (mm)	max 105.71
Depth of fuze intrusion (mm)	max 46.8
Delay time - delay action (ms)	20 ÷ 50
Muzzle safety (m)	min 50
Ready to act - armed (m)	max 300
Safety - mechanical, centrifugal, pyrotechnic (ms)	200 ÷ 250
Arming during axial acceleration (m/s^2)	24000 ÷ 230000
Rotation (min^{-1})	min 3100
Muzzle velocity (m/s)	max 1100
Fuze mass (kg)	0.42
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

FUZES

FUZE UTIU M72B3

The fuze UTIU M72B3 is mechanical, point-detonating fuze located at the nose, with superquick, inertia and delay action (it can be set at superquick and delay action).

It is intended for the assembling the HE projectiles with and without base-bleed in calibers 85 mm, 100 mm, 122 mm, 130 mm and 152 mm for guns and howitzers.

The fuze with cap is safe for firing in snow and rain.

It is safe in all conditions of transportation and handling.

Action type (setting)	superquick, delay
Total height of fuze (mm)	max 105.71
Depth of fuze intrusion (mm)	max 46.8
Delay time - delay action (ms)	20 ÷ 50
Muzzle safety (m)	min 10
Ready to act - armed (m)	max 200
Safety - mechanical, centrifugal, pyrotechnic (ms)	100 ÷ 200
Arming during axial acceleration (m/s^2)	24000 ÷ 230000
Rotation (min^{-1})	min 3100
Muzzle velocity (m/s)	max 1100
Fuze mass (kg)	0.42
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

FUZE UTIU M02

The fuze UTIU M02, with superquick, inertia and delay action, is mechanical, point-detonating fuze located at the nose.

It is intended for the assembling HE projectiles 105 mm HE ER M02 and 105 mm HE ER-BB M02.

It can be set at superquick and delay action.

The fuze is safe for firing in rain and snow.

It is safe in all conditions of transportation and handling.

Action type (setting)	superquick, delay
Total height of fuze (mm)	max 153.33
Depth of fuze intrusion (mm)	max 56.13
Delay time - delay action (ms)	20 ÷ 50
Muzzle safety (m)	min 40
Ready to act - armed (m)	max 150
Safety - mechanical, centrifugal, pyrotechnic (ms)	100 ÷ 200
Arming during axial acceleration (m/s^2)	24000 ÷ 230000
Rotation (min^{-1})	min 3100
Fuze mass (kg)	0.57
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

FUZES

FUZE UTIU M02P1

The fuze UTIU M02P1, with superquick, inertia and delay action, is mechanical, point detonating fuze located at the nose.

It is intended for the assembling the HE projectiles with and without base-bleed in calibers 105 mm, 122 mm (with special adapter) and 155 mm for guns and howitzers.

It can be set at superquick and delay action.

The fuze is safe for firing in rain and snow.

It is safe in all conditions of transportation and handling.

Action type (setting)	superquick, delay
Total height of fuze (mm)	max 153.33
Depth of fuze intrusion (mm)	max 56.13
Delay time - delay action (ms)	20 ÷ 50
Muzzle safety (m)	min 10
Ready to act - armed (m)	max 200
Safety - mechanical, centrifugal, pyrotechnic (ms)	100 ÷ 200
Arming during axial acceleration (m/s^2)	24000 ÷ 230000
Rotation (min^{-1})	min 3100
Fuze mass (kg)	0.81
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

75

FUZES

FUZE UT-PE M69

The fuze UT-PE M69 is located at the nose and it is impact piezoelectric fuze with superquick action.

It is intended for assembling projectiles HEAT Shell 90 mm M74, 100 mm M69 and 100 mm M88.

The fuze has an interrupted explosive train and the electrical detonator in short circuit.

It is safe in all conditions of transportation and handling.

Action type	superquick
Total fuze height (mm)	max 101.36
Depth of fuze intrusion (mm)	max 44.38
Muzzle safety (m)	min 2.5
Ready to act - armed (m)	40
Axial acceleration (m/s^2)	max 250000
Fuze mass (kg)	0.191
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

FUZES

FUZE UT-PE M87P1

The fuze UT-PE M87P1 is superquick and piezoelectric.

It is intended for assembling the HEAT projectiles of calibers 100 mm, 122 mm and 125 mm, firing from antitank gun 100 mm T-12, howitzer 122 mm D-30, self-propelled howitzer 122 mm 2S1 and tank gun 125 mm D-81.

The fuze is bipartite, impact and it has superquick action.

It consists of an upper and a lower fuze.

The fuze is safe in all conditions of transportation, storage and handling.

Action type	superquick
Muzzle safety (m)	min 2.5
Ready to act - armed (m)	20
Arming during axial acceleration (m/s^2)	min 36000
Upper fuze (piezoelectric generator) mass (g)	85
Lower fuze mass (g)	170
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

FUZE UTE M03

The fuze UTE M03 is intended for assembling artillery projectiles 105 mm and 155 mm of special purpose (illuminating, smoke with HC containers, propaganda, etc) with 2"-12UNS-1A thread, for howitzers in calibers 105 mm and 155 mm.

The fuze is electronic and it is located at the nose.

It possesses timing function as well as secondary contact function.

The time is set with a button and is shown on the display.

The fuze is protected from intended and unintended eletromagnetic interferences.

It is safe in all conditions of transportation, storage and usage.

Action type	timing, secondary contact
Time setting, with button and display (s)	3.2 ÷ 199.9 (pitch of 0.1, accuracy of ± 0.05)
Total fuze height (mm)	max 134.1
Depth of fuze intrusion (mm)	max 38.2
Muzzle safety (m)	mechanical: min 400 calibers, electronic: min 3 s per firing
Arming during axial acceleration (m/s^2)	24000 ÷ 250000
Rotation (min^{-1})	2000 ÷ 25000
Muzzle velocity (m/s)	max 1100
Fuze mass (kg)	0.6
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

FUZES

FUZE UTE M03A1

The fuze UTE M03A1 is intended for assembling 105 mm and 155 mm timed artillery projectiles (high-explosive, smoke with white phosphorus, etc) with 2"-12UNS-1A thread.

The fuze is electronic and it is located at the nose.

It possesses timing function as well as secondary contact function.

The time is set with a button and it is shown on the display.

The fuze is protected from intended and unintended eletromagnetic interferences.

It is safe in all conditions of transportation, storage and usage.

Action type	timing, secondary contact
Time setting, with button and display (s)	3.2 ÷ 199.9 (pitch of 0.1, accuracy of ± 0.05)
Total fuze height (mm)	max 152.03
Depth of fuze intrusion (mm)	max 56.13
Muzzle safety (m)	mechanical: min 400 calibers, electronic: min 3 s per firing
Arming during axial acceleration (m/s^2)	24000 ÷ 250000
Rotation (min^{-1})	2000 ÷ 25000
Muzzle velocity (m/s)	max 1100
Fuze mass (kg)	0.65
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

FUZE UTE M10

The fuze UTE M10 is intended for assembling artillery projectiles 105 mm and 155 mm of special purpose (illuminating, smoke with HC containers, propaganda, etc) with 2"-12UNS-1A thread, for howitzers in calibers 105 mm and 155 mm.

The fuze is electronic and it is located at the nose.

It possesses timing function as well as secondary contact function.

The time setting is wireless, with setter (device for time setting and function selection).

The fuze is protected from intended and unintended eletromagnetic interferences.

It is safe in all conditions of transportation, storage and usage.

Action type	timing, secondary contact
Time setting, with setter (s)	3.2 ÷ 199.9 (pitch of 0.1, accuracy of ± 0.05)
Total fuze height (mm)	max 133.7
Depth of fuze intrusion (mm)	max 38.2
Muzzle safety (m)	mechanical: min 400 calibers, electronic: min 3 s per firing
Arming during axial acceleration (m/s^2)	20000 ÷ 250000
Rotation (min^{-1})	2000 ÷ 25000
Fuze mass (kg)	0.77
Operating temperature (°C)	-30 ÷ +50

Sloboda

75

FUZES

FUZE UTE M10A1

The fuze UTE M10A1 is intended for assembling artillery timed projectiles (high-explosive, smoke, etc) with a 2"-12UNS-1A thread, for all calibers from 76 to 203 mm.

The fuze is electronic and it is located at the nose.

It possesses time function as well as secondary contact function.

The time setting is wireless with setter (device for time setting and function selection).

The fuze is protected from intended and unintended eletromagnetic interferences.

It is safe in all conditions of transportation, storage and usage.

Action type	timing, secondary contact
Time setting, with setter (s)	3.2 ÷ 199.9 (pitch of 0.1, accuracy of ± 0.05)
Total fuze height (mm)	max 151.6
Depth of fuze intrusion (mm)	max 56.1
Muzzle safety (m)	mechanical: min 400 calibers, electronic: min 3 s per firing
Arming during axial acceleration (m/s^2)	20000 ÷ 250000
Rotation (min^{-1})	2000 ÷ 25000
Fuze mass (kg)	0.82
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

75

FUZES

FUZE UB M16

The fuze UB M16 is electronic and it is located at the nose.
It possesses proximity function as well as secondary contact-superquick function.
It is intended for assembling artillery high-explosive projectiles from 105 to 155 mm with 2"-12UNS-1A thread.
The proximity action is based on the Doppler effect of radio waves.
The fuze possesses blocking function (active during the last 2.5 seconds of flight).
The flight duration is given with setter (device for time setting and function selection) and the fuze has possibility of setting up levels of sensitivity for the proximity function with the setter.
The fuze is protected from intended and unintended eletromagnetic interferences.
It is safe in all transportation conditions as well as in all conditions of storage and use.

Action type	proximity, secondary contact
Height of proximity action (m)	10 ± 8
Total fuze height (mm)	max 151.6
Depth of fuze intrusion (mm)	max 56.1
Muzzle safety (m)	mechanical: min 400 calibers, electronic: blocking action
Arming during axial acceleration (m/s^2)	20000 ÷ 250000
Rotation (min^{-1})	2000 ÷ 25000
Muzzle velocity (m/s)	max 1100
Fuze mass (kg)	0.825
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

FUZES

FUZE UMF M16

The fuze is electronic, located at the nose, multifunctional and it is intended for assembling artillery HE projectiles of calibers from 105 to 155 mm with 2"-12UNS-1A thread.
The selection of fuze action (proximity, timing or superquick) is wireless, with the setter.
The default setting of the fuze is with proximity action (based on the Doppler effect).
The fuze has a possibility of setting up levels of sensitivity for the proximity function.
UMF M16 also possesses a blocking action (it is active during the last 2.5 s of flight).
The fuze is protected from intended and unintended eletromagnetic interferences.
It is safe in all transportation conditions as well as in all conditions of storage and use.

Action type	proximity, timing, superquick impact
Function (action) selection	with setter
Total fuze height (mm)	max 151.6
Depth of fuze intrusion (mm)	max 56.1
Muzzle safety (m)	mechanical: min 400 calibers, electronic: min 3 s per firing
Arming during axial acceleration (m/s^2)	20000 ÷ 250000
Rotation (min^{-1})	2000 ÷ 25000
Muzzle velocity (m/s)	max 1100
Height of proximity action (m)	10 ± 8
Time setting, with setting device (s)	3.2 ÷ 199.9 (pitch of 0.1, accuracy of ± 0.05)
Fuze mass (kg)	0.825
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

UTIF

The UTIF is an autonomous electronic device intended for time setting and function selection of electronic fuzes UMF M16, UB M16, UTE M10A1 and UTE M10.

It provides:

- *selection and display of function (proximity, time, superquick) and last entered time,*
- *selection and display of time setting when the time function of fuze is selected,*
- *wireless entering of the selected data in the fuze,*
- *wireless reading of the entered data from the fuze.*

Function selection	proximity, time, superquick impact
Entering/reading	wireless
Indication of proper entering/reading	light and sound
Indication of improper entering/reading	light and sound
Power supply	battery of primary type
Nominal battery voltage (V)	3.6
Capacity (Ah)	5.8 (1000 cycles of entering)
Time setting, using device (s)	3.2 ÷ 199.9 (pitch of 0.1, accuracy of ± 0.05)
Device mass (kg)	0.6
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

GUN PRIMERS

GUN PRIMER KT M28A2

The gun primer KT M28A2 is intended for initiating the propellant charge M2 assembled into the cartridge case 105 mm M14 and is used for 105 mm HE M1, 105 mm WP M60 and 105 mm ILL M314A4 rounds.

The gun primer is made of brass, with holes for igniting the propellant charge (black powder N°1).

It is activated by the strike of the firing pin.

The gun primer is airtight and safe in all conditions of transportation, storage and usage.

Primer type	percussion, mechanical
Minimum conditions for action (J)	1.121
Mean working pressure of powder gases (bar)	2305
Gun primer height (mm)	max 260.6
Primer rim diameter (mm)	Ø15.75
Primer diameter, where it is pressed into the cartridge case (mm)	Ø14.071
Powder	black powder N°1
Powder mass (g)	19.4
Primer mass (g)	140
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

75

GUN PRIMERS

GUN PRIMER KT M28P1

The gun primer KT M28P1 is intended for initiating the propellant charge M2 assembled in the cartridge case 105 mm M10 (cartridge case 105 mm M14 with thread) and is used with the round 105 mm HE M1, 105 mm WP M60 and 105 mm ILL M314A4.

It is made of brass with holes for initiating the propellant charge (black powder N°1).

The primer is activated by the strike of the firing pin.

The primer is airtight and safe in any type of transportation, storage and usage.

Primer type	percussion, mechanical
Minimal conditions for action (J)	1.121
Mean operating pressure of powder gases (bar)	2305
Primer height (mm)	max 260.6
Diameter of primer rim (mm)	Ø20
Thread	SpW 5/8" - 18 2A
Powder	black powder N°1
Powder mass (g)	19.4
Primer mass (g)	140
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

GUN PRIMERS

GUN PRIMER KT M82P2

The gun primer KT M82P2 is intended for assembling 155 mm ammunition, without the cartridge case, for self-propelled gun-howitzer NORA-B52 M15 and for initiating the propellant charge, as well as for other 155 mm arms.

The primer is made of brass.

Before the firing, it is placed into the firing mechanism's stock in the breech block out of which it is, durign the firing, automatically driven into the primer bearing, in which the ignition of the primer is being performed.

The primer is activated by the strike of the firing pin.

It is water-resistant and safe in all conditions of transportation, storage and usage.

Primer type	percussion, mechanical
Minimum energy needed for activation (J)	1.04
Maximum energy needed for non-activation (J)	0.29
Maximum pressure of powder gasses (bar)	< 3500
Primer height (mm)	max 49.8
Primer diameter (mm)	Ø15.15
Powder	black powder N°7
Powder mass (g)	1.4
Primer mass (g)	33
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

75

GUN PRIMERS

GUN PRIMER KT M71

The gun primer KT M71 is intended for initiating the propellant charge of ammunition in calibers:

- *57 mm, for antiaircraft gun S-60,*
- *76 mm, for mountain gun M48 B-1 and gun M42 (ZIS-3),*
- *85 mm, for antiaircraft gun M39/42 or M39/44,*
- *100 mm, for gun D-10 and antitank gun T-12,*
- *122 mm, for howitzer D-30 and M38,*
- *130 mm, for gun M46,*
- *152 mm, for gun-howitzer D-20 and M37.*

The primer is airtight and safe in all conditions of transportation, storage and use.

Primer type	percussion
Minimal conditions for action - impact energy (J)	2.065
Primer height (mm)	max 23.9
Primer diameter (mm)	max Ø30
Thread	SpW 27.178 x 14 pitches
Powder	black powder N°7
Powder mass (g)	2
Primer mass (g)	85
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

75

GUN PRIMERS

GUN PRIMER KT-EU M84

The gun primer KT-EU M84 is electro-percussion and it is intended for initiating of base propellant charge M88 which is introduced into the ammunition 125 mm for 125 mm gun on the tank M84 or T-72.

The gun primer is airtight and safe in all conditions of transportation, storage and usage.

Primer type	electro-percussion
Minimum conditions for action - impact energy (J)	2.1
Voltage and time of action of the current pulse (V/s)	20/0.004
Electrical resistance of the circuit (Ω)	1 ÷ 3.6
Primer height (mm)	max 24
Primer diameter (mm)	max Ø30
Thread (mm)	SpW 27.178 x 14 pitches
Powder	black powder N°7
Powder mass (g)	1.35
Primer mass (g)	85
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

75

GUN PRIMERS

GUN PRIMER KT M1

The gun primer KT M1 is intended for initiating the propellant charge BLANK (SALUTE) assembled in the cartridge case 105 mm SALUTE and is used with 105 mm BLANK (SALUTE) rounds.

It is also intended for assembling the ammunition for antiaircraft guns 40 mm.

The primer is made of brass, with holes for igniting the powder charge (black powder N°1).

It is activated by the strike of the firing pin.

The primer is airtight and safe in all conditions of transportation, storage and usage.

Primer type	percussion, mechanical
Minimal conditions for action (J)	1.121
Primer height (mm)	max 94.24
Diameter of primer rim (mm)	Ø15.75
Primer diameter, where it is pressed into the cartridge case (mm)	Ø14.071
Powder	black powder N°1
Powder mass (g)	6.3
Primer mass (g)	69
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice

Sloboda

75

GUN PRIMERS

GUN PRIMER KT M02

The gun primer KT M02 is intended for initiating the variable propellant charge M15 and the full propellant charge M15 assembled in the cartridge case 105 mm M14 and is used for 105 mm HE ER-BT M15 round and 105 mm HE ER-BB M15 round.

It is made of brass, with holes for igniting the propellant charge (black powder N°1).

It is assembled by pressing into the cartridge case 105 mm M14.

It is activated by the strike of the firing pin.

The gun primer is airtight and safe in all conditions of transportation, storage and usage.

Primer type	percussion, mechanical
Minimum conditions for action (J)	1.121
Mean working pressure of powder gases (bar)	2650
Primer height (mm)	max 290
Primer rim diameter (mm)	Ø15.75
Primer diameter, where it is pressed into the cartridge case (mm)	Ø14.071
Powder	black powder N°1
Powder mass (g)	23.6
Primer mass (g)	155
Operating temperature (°C)	-30 ÷ +50

FOR MORE INFORMATION CONTACT US. Data contained herein are informative only and subject to amendment without previous notice.

1948

Sloboda 75

2023

KOMPANIJA "SLOBODA" AD • **Ratka Mitrovića bb • 32000 Čačak • Republic of Serbia**

e-mail: slobexport@sloboda.co.rs • http://www.sloboda.co.rs • Phone: (+381 32) 515 0944