



# MLRS G-2000P / P+ 122mm

## Portable iterations of the GRAD 122mm artillery rocket

As a frontrunner in the field of artillery rocket systems, EDePro continues to raise the bar by harnessing our state-of-the-art technologies and deep-rooted rocket design expertise to create innovative iterations of the well-known GRAD 122mm rocket. Our family of unguided artillery rockets the G-2000P (portable) comprises versions that share the same rocket motor but differing in warhead types. The G-2000P rockets maintain the same range as the original GRAD 122mm, yet exhibit reduced mass and length. The range is adjustable through a standard procedure, similar to the original rocket, by replacing the large and small braking rings. With a reduced initial mass for approx. 20kg and a shortened rocket length by almost 1m, coupled with an entirely new rocket motor design featuring a single propellant grain, our G-2000P rockets boast minimal dispersion and high efficiency.

### Tactical Use

Similar to its predecessors from EDePro's 122mm portfolio, the G-2000P are renowned for exceptional operational reliability. These rockets can be effectively employed in diverse scenarios where wide area coverage takes precedence over pinpoint accuracy.

### Warhead Type

The G-2000P family can have standard HE-FRAG or new warhead specifically engineered by EDePro team for enhanced efficiency - a higher lethal radius and improved fragmentation. The original GRAD rocket incorporates a standard warhead (M-210F). By changing it to ours S or SL warheads, the lethal radius is increased by approx more than 40%, along with a significantly higher number of fragments hitting the target. Furthermore, all versions feature the same MRV-U warhead fuse.

### Integration Flexibility

The rockets are fully compatible with the MLRS such as BM-21 and RM-70, or similar existing launchers. It can also be built in a version that is compatible with the 9P132 122mm man-portable launcher that fires 9M22M rockets.

### MAIN SPECIFICATIONS

- Ø **Calibre: 122 mm**
- ◇ **Range: up to 20 km**
- 📏 **Initial mass: 46.4 kg**
- ◇ **Length: 1948 / 2048 mm**



### Enhanced Logistics

Reducing the mass and dimensions of artillery rockets offers several benefits, particularly in terms of mobility, logistics, and operational effectiveness. Lighter and smaller rockets are easier to transport, allowing for quicker deployment and repositioning of artillery units. Manufacturing and maintaining smaller rockets is more cost-effective, which leads to more efficient supply chains and the ability to sustain operations for longer periods. The rocket's pallet dimensions for G-2000P measure 2050x1200x1200mm, weighing 1250 kg for 16 pieces.



\*single wooden box - 2000x305x260mm, 72kg

## MAIN TACTICAL AND TECHNICAL PERFORMANCES

Parameters	9M22U/M-210F	G-2000P	G-2000P+	Unit
Calibre	122	122	122	mm
Length	2875	<b>1948</b>	<b>2048</b>	mm
Initial mass	66	<b>46.4</b>	<b>51</b>	kg
Maximal range (Xe)	20	<b>20.2</b>	<b>18.9</b>	km
Temperature range	-30 ÷ +50	-40 ÷ +60	-40 ÷ +60	°C
Fuse designation	MRV-U	MRV-U	MRV-U	-
Warhead type	HE-frag M-210F	<b>new HE-frag</b>	<b>new HE-frag</b>	-
Warhead's mass (with MRV-U fuse)	19.1	18.4	23	kg
Number of W.H. fragments	3920	5000	5930	pcs
Ready-made (weighing 5g)	0	0	430	pcs
Ready-made (weighing 3g)	2280	2500	5500	pcs
Type of explosive filling	TNT	TNT	TNT	-
Warhead lethal radius	25	35	35	m
Type of propellant	double base	composite	composite	-
Propellant's mass	20.45	13	13	kg
RM's burning time	2.0	2.4	2.4	s
RM's total impulse	39700	30550	30550	Ns
RM's specific impulse	1940	2350	2350	Ns/kg
Max velocity at max range (Xe)	690.6	746	666	m/s
Apogee	7100	7110	6480	m
Time of flight at max range (Xe)	76	76.5	73.3	s
CEP at max range (Xe)	1.27	<b>&lt; 1</b>	<b>&lt; 1</b>	%

## ROCKET'S SUBCOMPONENTS



## BENEFITS

- » significantly reduced mass and length, with equivalent range to the GRAD 122mm artillery rocket;
- » enhanced warhead (versions S & SL) with improved efficiency;
- » same connecting thread for warheads as in rocket 122mm GRAD;
- » possibility of implementation on lightweight launchers;
- » simplified logistics, enhanced mobility and adaptability, ease of handling and lower cost.

