



# 122 mm, G-2000-P/P+ MLRS GRAD

## Artillery rocket



Rocket G2000-P/P+ is fully compatible with the mobile multiply launching rocket systems such as BM-21 and RM-70, or similar existing launchers. Also rocket can be produced in version which is compatible with GRAD portable complex 9P132.

Rocket G2000-P/P+ has a range over 20km and great accuracy.

Rocket motor is completely new modern design with single propellant grain, which is inhibited along the outer surface and front end. It contains two types of propellant, which differ in burning rate. This has resulted in a high-level loading factor, almost neutral burning and minimization of the sliver.

Solid rocket propellant used for grain production is modern thermoplastic composite propellant with excellent energetic, mechanical and aging characteristics. The steel nozzle with abounded ablative materials has one graphite throat.

Rocket G2000-P have new warhead of 18.4 kg mass (designation SL) which is HE-fragmentation with improved efficiency - higher lethal radius and better fragmentation as well as aerodynamic design.

Rocket G2000-P+ have new massive warhead of 23 kg mass (designation SL+) which is HE-fragmentation with improved efficiency - higher lethal radius and better fragmentation as well as aerodynamic design.

Warhead fuze is MRV-U.

## TECHNICAL CHARACTERISTICS:

	<b>9M22M</b>	<b>G-2000P</b>	<b>G-2000P+</b>
Caliber, mm	122	122	122
Length of rocket with fuze, mm	1930	1930	2030
Total mass of rocket, kg	46	46	50.6
Warhead mass with MRV-U fuze, kg	19.1	19.1	23.7
Number of W.H. fragments, pcs	3920	5000	5930
Ready-made (weighing 3 g), pcs	2280	2500	2560
Ready-made (weighing 5 g)	0	0	430
From the body (average ~ 2.5g), pcs	1640	2500	2940
Type of explosive filling	TNT	TNT	TNT
Warhead lethal radius, m	25	35	35
Fuze designation	MRV-U	MRV-U	MRV-U
Type of propellant	Double base	Composite	Composite
Propellant mass, kg	9.5	12.9	12.9
Burning time, s	1.2	1.9	1.9
Total motor impulse, Ns	18400	30350	30350
Specific motor impulse, Ns/kg	1940	2350	2350
Number of rocket nozzles	6	1	1
Range (Xe) from sea level, km	10.8	20.2	19.1
Range from 1.200 m (Xe) <sub>200'</sub> , km	12	22	21
CEP at max. range, %	1.27	<1	<1
Temperature range, °C	-30 to +50	-30 to +60	-30 to +60