“GRAD” is self-propelled multi-tube missile launcher intended for impact, sudden and quick fire assaults on the surface targets in the depth of the enemy. It is efficient against all types of targets: personnel, non-armoured and armoured vehicles. System “GRAD” fires three types of missiles: GRAD, GRAD M and GRAD 2000. The launcher is carried on the vehicle TAM 150 T11 BV 6x6. It is possible to mount it on other vehicles of the similar characteristics (for example FAP 1417).

Rocket GRAD cal. 122 mm

PERFORMANCE
Caliber ........................................ 122 mm
Length ...................................... 2875 mm
Total mass ................................. 66 kg
Warhead mass with fuse ............. 19.1 kg
Propellant mass .......................... 20.45 kg
Motor total impulse ................. 39700 Ns
Motor specific impulse ............ 1940 Ns
Temperature range .............. -30° to +50°C
Elevation ................................. 48.48°
Range ...................................... 20.1 km

MAJOR PARTS
1. Aerodynamic ring for drag increasing
2. Warhead
3. Fuse
4. Nozzle assembly with fins and contact cover
5. Rocket driver
6. Twin combustion chamber and twin grain motor
**GRAD M-rocket cal. 122 mm**

**PERFORMANCE**
- Caliber: 122 mm
- Length: 2875 mm
- Total mass: 69.3 kg
- Warhead mass with fuse: 19.1 kg
- Propellant mass: 25.6 kg
- Motor total impulse: 51400 Ns
- Motor specific impulse: 2010 Ns
- Temperature range: -30° to +50°C
- Elevation: 48.48°
- Range: 27.8 km

**MAJOR PARTS**
1. Aerodynamic ring for drag increasing
2. Warhead
3. Fuse
4. Nozzle assembly with fins and contact cover
5. Rocket driver
6. Single combustion chamber and single star shaped grain motor

**GRAD 2000-rocket cal. 122 mm**

**PERFORMANCE**
- Caliber: 122 mm
- Length: 2925 mm
- Total mass: 68.3 kg
- Warhead mass with fuse: 19.1 kg
- Propellant mass: 27.3 kg
- Motor total impulse: 62250 Ns
- Motor specific impulse: 2280 Ns
- Temperature range: -30° to +50°C
- Range (elevation 50°): 38.4 km
- * Optimal angle of elevation: 55°
- * Range: 40 km

**MAJOR PARTS**
1. Aerodynamic ring for drag increasing
2. Warhead
3. Fuse
4. Single nozzle assembly with fins and contact cover
5. Rocket driver
6. Single combustion chamber and single cylindrical grain motor