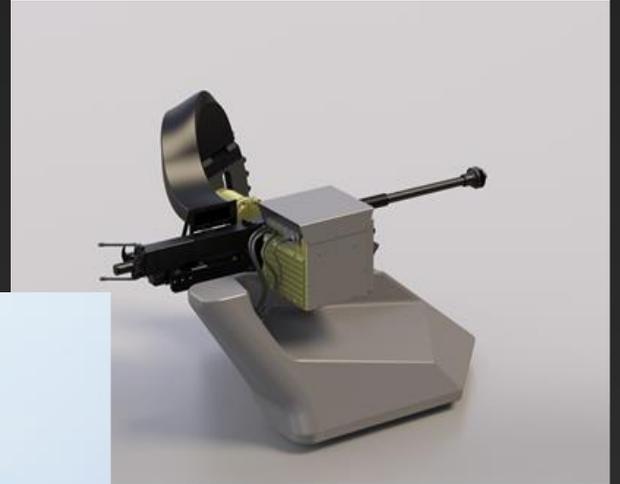




TURRET MG NW-12.7



The turret machine gun system is installed on lightly armored vehicles and is designed to engage lightly armored vehicles and air targets (helicopter) at ranges up to 2000m day and night.

The combat module is Autonomous, closed, stabilized, remotely controlled from the operator's seat.

Optoelectronic station -1 units:

- Day camera (wide-angle lens),
- Day camera (long-focus lens),
- Night camera (wide-angle lens),
- laser rangefinder,
- Computer video processing (video image stabilization system),
- Special software,
- Connection cable
- Front : CEN: BR-7 (motorized, armored front cover with a viewing slot),
- Side armor. CEN: BR-6.

Operator console – 1 unit:

- Getac A140 - fully rugged tablet
- Industrial joystick
- OS Linux
- Special software
- Connection cable

Turret -1 unit:

- Two-axis drive system (azimuth, pitch - BLDC motor / gearbox)
- Mounting bracket for weapons (including shock absorber)
- Ammunition box (100 rounds 12,7×108 mm)
- Flexible ammunition delivery hose
- Gun recharger actuator
- Connector for electronic shutter release, gun recharger actuator and smoke grenade
- Connector for optoelectronic station
- Connector for Operator console
- Front armor of electric drives: CEN: BR-7 and ammo box. CEN: BR-6.
- Smoke grenade mount
- Transportation stops
- Lifting EYE Bolts 2 units
- Shipping cover

Main requirements:

- Weight 170kg.,
- 22....30 Volt DC Power Supply,
- International Protection Rating: IP-66,
- Azimuth rotation: 360° + (rotation are not limited)
- Pitch rotation: -20° $+60^{\circ}$
- Guidance actuators: Electromechanical, without manual duplication
- Aiming of the armament in the vertical and horizontal planes of 0.1...15 degree/s
- Transfer speed in vertical and horizontal planes: not less than 60 deg / s
- Designed for installation of heavy machine gun DSHK 12.7x108mm made by Grand Power s.r.o.
- Fire single shots or bursts.
- Provides the ability to install smoke grenades.
- Accuracy: 1.5 Mrad ($0,08^{\circ}$)



Main parameters optoelectronic station:

1. - **Day camera (wide-angle lens):**
 - a. The angle of view of the color television camera in the wide field of view is not less than $11^{\circ} \pm 10\%$ horizontally and $8.2^{\circ} \pm 10\%$ vertically
 - b. Camera resolution: 1280x720
 - c. Frame rate at full resolution, not less: 25fps
 - d. Lens focal length: 50mm
 - e. The detection range of tank-type target by color television camera in wide field of view is at least 2,500 m (side view)
2. - **Day camera (long-focus lens),**
 - a. The angle of view of color television camera in narrow field of view is not less than $2.7^{\circ} \pm 10\%$ horizontally and $2^{\circ} \pm 10\%$ vertically
 - b. Camera resolution: 1280x720
 - c. Frame rate at full resolution, not less: 25fps
 - d. Lens focal length: 200mm
 - e. The detection range of tank-type target by color television camera in narrow field of view is at least 5,000 m (side view)

3. - **Night camera (wide-angle lens),**
 - a. Horizontal angle of view of thermal imaging camera: $6.2^{\circ} \pm 10\%$
 - b. Vertical angle of view of the thermal imaging camera: $4.7^{\circ} \pm 10\%$
 - c. Focal Length: 100 mm
 - d. Camera resolution: 640 x 480
 - e. Frame frequency: 25fps
 - f. Target detection range of tank type, with thermal contrast of object relative to background of at least 2°C , thermal imaging camera is not less than 6500 m (side view)
 - g. Spectral working range camera: 8...14 μm
4. - **laser rangefinder,**
 - a. Measurement Range: 50...4 000 m
 - b. Typical measurement range Man Size Target (0.75 m x 0.75 m, Albedo 30 %, 10 km Visibility) ≥ 2.000 m

As the main weapon for installation on the turret is recommended to use DSHKM vz.16 Heavy Machine Gun caliber 12,7x108mm made by Grand Power Slovakia

DShKM heavy machine gun cal. 12,7x108mm is originally Russian production as brand new modernized advanced version is under production in Slovak republic (EU). DShKM is a gas operated, belt fed, air cooled machine gun that fires from an open bolt and in automatic mode only. The gas piston and chamber are located below the barrel; the gas piston is of the long stroke type and is attached to the bolt carrier. The gas chamber is fitted with a gas regulator, which requires a special wrench to make adjustments. The rear of the receiver houses two spring buffers, one for the bolt and one for the bolt carrier. The heavy barrel is finned for better cooling, and is fitted with a large muzzle brake. The barrel can be detached from the weapon and replaced quite fast and easily. The machine gun primarily designated for defeating the lightly armored targets, fire installations and living force of enemy at the distance up to 2.000m.

GRAND POWER TG vz. 16 technical specification

Machine gun Type	Automatic Heavy Machine Gun
Caliber/Cartridge	Standard 12,7x108mm (Ball, API, API-T, HEI)
Weight of weapon	34 kg (without support), 102 kg (with pick-up support)
Weapon length	1625 mm
Barrel length	1070 mm
Rate of fire	600-700 rounds/min (theoretical), 180 rounds/min (practical)
Muzzle velocity	850 m/s
Max. effective range	1800 – 2000 metres

