



RCWS 20 mm

Remotely controlled weapon station



A 20 mm RCWS with a built-in weapon is intended for destruction and neutralization of personnel, armored and other materiel on the ground and in the air, when coming to a halt, at the effective range of the integrated weapon. Its fire power ensures the fire support to the embarkment crew during advancement.

The individual subsystems are intended for:

- 1) 20 mm gun M55 is intended to destroy low-flying objects and personnel positioned in the open area or inside a light shelter, as well as the light armored materiel and vehicles at the effective ranges up to 1500 m.
- 2) 7.62 mm machine gun M86, featuring the effective range of up to 800 m, is a subsystem solely intended to destroy the unsheltered enemy personnel.
- 3) BGA (automatic grenade launcher) is intended to destroy any spotted and sheltered personnel by opening indirect or direct fire during a halt, within the effective range of up to 1200 m; it may even be used to destroy light armored vehicles, combat or other kind, within the ranges of up to 1000 m.

4) Semiautomatic guidance system of MALJUTKA missiles is primarily intended for use against armored materiel at the ranges of up to 3000 m, from a halt.

5) Smoke pot launchers are intended for launching the smoke pots (2x3 pcs) which create a smoke screen for masking, protection from laser radiation detection, and from anti-tank missiles. The smoke pots are launched and the aerosol cloud formed at the distance of minimum 100 m.

6) Control panel is intended to distribute +24 V power supply to the subsystems installed in the 20 mm RCWS, but also to control/select mode of fire (rocket/BGA), and to condition the fire through an on-off (circuit) function switch on the "FIRE" button. Also, the firing/launching missiles, BGA grenades or smoke pots can be launched through the control panel, by pressing the appropriate "FIRE" button. Missiles and launchers to be deployed are also selected by use of two function switches.

7) EOS is intended to provide safe and efficient aiming for all weapon systems integrated on the 20 mm RCWS, by introducing ballistic correction of the reticle based on the adopted values from the firing tables.

Technical data

- Length 3140 ± 150 mm
- Width, w/ missiles 1910 ± 100 mm
- Height, overall 1260 ± 100 mm
- Height, outside the vehicle 1040 ± 100 mm
- Weight, on its own 1350 ± 100 kg
- Powered by/operated electric power unit / manualy
- Field of action, in traverse (for all weapon subsystems) 360°
- Field of action, in elevation from -5° to 45°
- Primary source of power supply +24 V, vehicle

Technical Data for M55 Gun

- Muzzle velocity 850 m/s
- Rate of fire from 650 to 730 rounds/min
- Field of action, in traverse n x 360°
- Field of action, in elevation from -5° to 45°
- Number of rounds in the ammunition box 180 pcs
- Triggering, mode manual and electric
- Cocking, mode manual
- Effective range 1500 m

Technical Data for M86 Machine Gun

- Muzzle velocity from 800 m/s to 865 m/s
- Field of action, in traverse n x 360°
- Field of action, in elevation from -5 ° to 45°
- Number of rounds in the ammunition box 600 pcs
- Triggering, mode manual and electric
- Cocking, mode manual
- Effective range 800 m

Technical Data for 30 mm BGA

- Field of action, in traverse n x 360°
- Field of action, in elevation, for indirect firing from -5° to 45°
- Max. angle of elevation 70°
- Effective range 1200 m

Technical Data for Semiautomatic Guidance System for „MALJUTKA“ Missiles

- Max. range of fire 3 000 m
- Min. range of fire 500 m
- Number of missiles on the launcher 2 pcs
- Penetrability of homogenous armor 800 mm

Technical Data for EOS

- a) Detection of 2.3 x 2.3 m size objects, day & night, at ranges of up to 12000 m.
- b) Recognition of the object, day & night, at the ranges of up to 5000 m, which is a precondition for firing.
- c) Identification of the object, day & night, at the ranges of up to 2500 m.
- d) Generation of aiming and sensor symbology for firing from the selected weapon.
- e) Operating the aiming mechanisms of the BGA and 2T5 weapon stations.

Electrical and optical aiming system (hereinafter: EOS) coupled with the RCWS, comprises of:

- EO block (with TV camera, thermal imager, laser range finder, and inertial navigation system - INS),
- FCS computer (ballistic computer, operator/sensor microcontroller card, communication/video multiplexer, power module with HoldUp modules, video to Ethernet convertor),
- 12" monitor with touch screen display, functional keyboard, and encoders,
- triggering and lasering buttons integrated with the existing joystick (KBN),
- system wiring installation,
- FCS software (including the software for the ballistic computer, 12" monitor, and operator/sensor microcontroller card),
- correction board for rectification of EOS with the weapon systems.