

SUNGUR Low Level Air Defense System is Ready to Enter Service!

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Roketsan developed and produced a National Man-Portable Air Defense System (MANPADS/PORSAV) through national resources to replace the Stinger POST (FIM-92B) and Stinger RMP (FIM-92C) MANPADS in the inventory of the Turkish Armed Forces (TAF). Dubbed as PORSAV, the National ManPADS is a fully autonomous 'fire and forget' missile equipped with a two-stage (booster motor and sustainer motor) solid propellant rocket motor and features Aselsan's cooled Imaging Infrared (IIR) type seeker head (believed to operate in the three to five-micron waveband). The PORSAV is expected to be effective up to the altitude of 4km and a range of 6km+. The missile is believed to be armed with a 3kg high-explosive warhead (as in the case with the Stinger missile) loaded with tungsten ball projectiles.



As the lowest level unit of Turkey's layered air and missile defense capability the PORSAV has been undergoing development since 2013. According to the Turkish Ministry of National Defense (MoND)'s 2016 Activity Report in order to meet the Turkish Land Forces Command (TLFC)'s requirements the Portable Air Defense Missile System (PHSFS) Project Contract

was signed between the MoND and Roketsan on September 10, 2013. The PHSFS Project covers the design, development and production phases and according to the project schedule the first delivery would take place in September 2020 and deliveries would be completed in September 2022. The PHSFS Project was handed over to the SSB on November 28,

2016. According to sources within the scope of the PHSFS Project the first firing tests with Ballistic Test Missiles, Controlled Test Missiles and unarmored Seeker Guided Test Missiles took place in 2018 and 2019 at the Sinop test range and guided firing tests with armed Seeker Guided Test Missiles (with a live warhead) took place during the second half of June 2020. A short



video footage shared by the President of Defense Industries Prof. Ismail DEMIR on July 1, 2020, also included sections from live firing tests that were conducted on June 17, 2020 against a fixed target lifted some 20m from ground level and while simulating a static air target. During the test at least two live PORSAV missiles fired against a fixed target.

On July 1, 2020 President of Defense Industries Prof. Ismail DEMIR announced with a tweet that Turkey's new Mobile Low-Level Short-Range Air Defense System 'SUNGUR's tests were successfully completed and the brand-new weapon is ready to be added to the TAF inventory. According to SSB's DEMIR, the SUNGUR is able to engage its target while moving (shoot-on-the-move capability) and is able to detect, identify and track its targets both in day and night conditions with a 360-degree range.

The SUNGUR self-propelled surface-to-air missile system which provides mobile, short-range air defense protection for ground units against cruise missiles, unmanned aerial vehicles, low-flying fixed-wing aircraft, and helicopters is armed with PORSAV. According to a short video footage shared by Prof. DEMIR on his official twitter account the SUNGUR features a 360-degree rotating gyro-stabilized (allowing the missile pod to maintain aiming direction regardless of vehicle motion) air defense turret



mounted atop a BMC's VURAN 4x4 Armored Vehicle. The electrically controlled turret has two PORSAV missile launcher pods, each capable of firing 2 fire-and-forget IIR guided missiles in rapid succession and is

radar tracks and messages to be passed to the fire unit to alert and cue the gunner.

According to the same footage SUNGUR is manned by a gunner, who operates inside the

and two joysticks. Targets are acquired by using the STAR SAFIRE 380 HLD FLIR (forward-looking infrared), which features a laser range finder and a video auto tracker. The FLIR sensor provides SUNGUR with a target acquisition capability in obscured battlefields, at night, and in adverse weather.



fitted with a Star SAFIRE 380 HLD FLIR System for target detection and tracking purpose. Contrary to ZIPKIN and ATILGAN PMS Systems in the TLFC inventory the SUNGUR is not equipped with a .50-calibre automatic machine gun to cover the missile dead zone and engage ground targets. The SUNGUR is expected to be able to communicate with the TLFC's Air Defense Early Warning and Command Control System (HERIKKS/Skywatcher), which permits external

vehicle under armour protection. The gunner uses a control and display panel that features a multifunction color display

The SUNGUR Low Level Air Defense System and PORSAV National MANPADS are expected to enter service with the TAF in late 2020. As pointed out by the SSB's Prof. DEMIR, the SUNGUR/PORSAV will also be integrated with Land, Air and Sea platforms in the inventory of the TAF in the near future.

