

Russia's Verba anti-aircraft system

Russia's next generation manportable air defence system (MANPADS) can engage aircraft, drones and cruise missiles head-on in a frontal attack. Most western MANPADS operate only in pursuit of a target

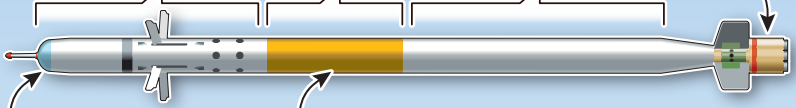
Verba 9M333 rocket

Guidance section

Warhead

Solid-fuel flight motor

Launch booster



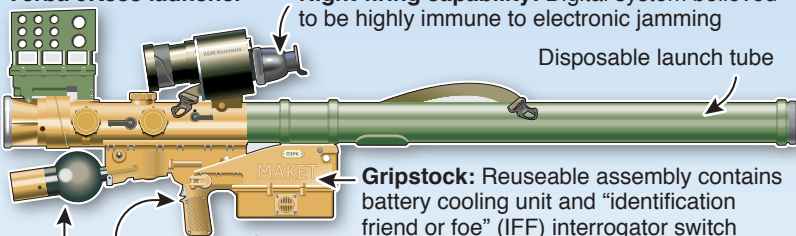
Tri-band heat seeker:

Operates in ultraviolet, near- and mid-infrared wavelengths to increase target range by 250%

1.5kg high-explosive. Blast generator uses any remaining rocket fuel as additional explosive

Range	6km
Kill altitude	up to 6,500m
Velocity	500m/s
Weight	11-12kg
Length	1,635mm

Verba 9K333 launcher



Night-firing capability: Digital system believed to be highly immune to electronic jamming

Disposable launch tube

Thermal battery

Trigger

Gripstock: Reuseable assembly contains battery cooling unit and "identification friend or foe" (IFF) interrogator switch

IFF radar antenna: Detects transponders on friendly aircraft

Digital network:

Launchers can be linked to **automated fire control system** which can track multiple targets before they are within engagement range and assign targets to crews. This reduces reaction time from minutes to less than 20 seconds

Link to digital fire control network

