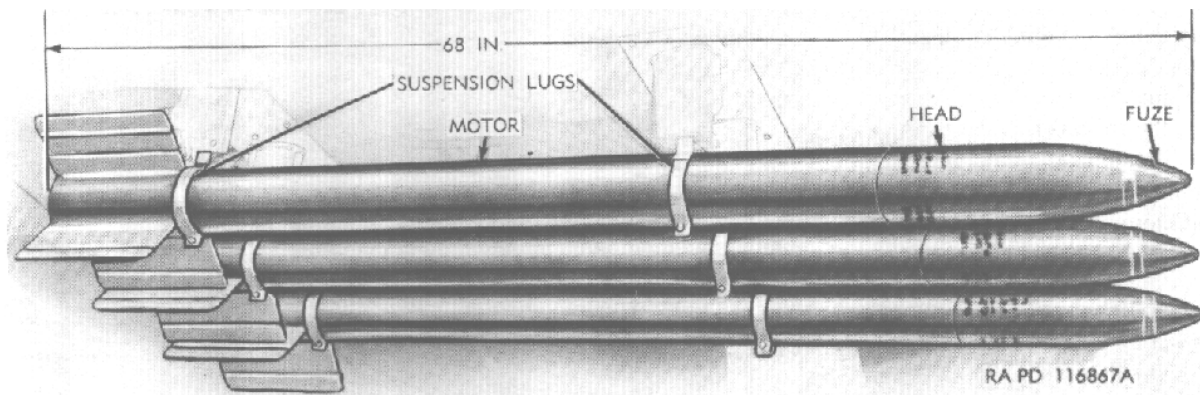


ROCKETS, 5 INCH (HVAR)



General. The 5.0-inch fin stabilized, high-velocity aircraft rocket is a Navy type used by the Air Force for forward firing from aircraft. The 5.0-inch rocket is fired from retractable jettisoning launcher using suspension bands. Electrical energy to fire the rocket is derived from the electrical system of the aircraft. The rocket consists of a fuze head and a motor.

Rocket Heads. Listed below are the various HVAR heads, which are assembled with 5.0-inch rocket motors to form HAVR complete rounds. Complete round data and nomenclature are given in tables. The TNT loaded heads Mk 6 and Mods are shipped with permanently installed base fuze Mk 159 Mod 1 or Mk 164 and Mods and a shipping cap which is replaced by nose fuze Mk 149. The head Mk 6 Mod 4 is specially deep cavitized to receive a VT fuze. The head Mk 25 Mod 1 is a shaped charge type (having an internal copper cone) loaded with composition B. As shipped, the head Mk 25 Mod 1 has a nose shipping plug, which is replaced by nose fuze Mk 149, and a shipping cap to protect the base threads.

HEAD, HIGH EXPLOSIVE, 5.0-inch ROCKET: HVAR, Mk 6 Mod 0, 1, 2, and 3, TNT loaded, with fuze, rocket base AN-Mk 159 (Mk 159 Mod 1) or AN-Mk 164 (Mk 164) and Mods installed.

HEAD, HIGH EXPLOSIVE, 5.0-inch ROCKET: HVAR, Mk 6 Mod 4, TNT loaded, adapted for fuze, VT, M403, with fuze, rocket, base AN-Mk 159 (Mk 159 Mod 1) and Mods or AN-Mk 164 (Mk 164) and Mods installed.

HEAD, INERT, 5.0-inch ROCKET: Mk 6 and Mods.

Fuze. The 5.0-inch HVAR head Mk 6 Mods is permanently fuzed with base fuze Mk 159 Mod 1 or Mk 164 and Mods. The heads Mk 6 and Mods and Mk 25 Mod 1 receive nose fuze Mk 149 Mod 0 or 1 after removal of the nose shipping cap. The Mk 6 Mod 4 receives VT fuze M403 or M403E2 (Mk 172 Mod 2).

Motor. Listed below are various similar 5.0-inch rocket motors which are assembled with 5.0-inch HVAR heads to form complete rockets as indicated in tables. The motor Mk 10 differs from the motor Mk 2 principally in having an Army igniter plug instead of a Navy (bayonet-type) plug. The 5.0-inch motor is

externally threaded at the forward end to engage the head. It consists of the motor tube, front closure disk, igniter, propellant, nozzle plate, suspension lugs and fin assembly and suspension lugs.

MOTOR, 5.0-INCH ROCKET: Mk 2 Mod 3

MOTOR, 5.0-INCH ROCKET: Mk 2 Mod 3 (with bayonet-type connector plug)

MOTOR, 5.0-INCH ROCKET: Mk 10 Mods 4 and 5

MOTOR, 5.0-INCH ROCKET: Mk 10 Mods 4 and 5 (with electrical connector Mk 11 Mod 5 or M3)

MOTOR, 5.0-INCH ROCKET: Mk 10 Mod 7 (without fin)

MOTOR, 5.0-INCH ROCKET, EMPTY: Mk 2 Mod 3

MOTOR, 5.0-INCH ROCKET, INERT: Mk 2 Mod 3

Fin Assembly. The fin assembly, which is clamped to the rear end of the motor, is a sleeve with four equally spaced rectangular fins extending radially.

Propellant. The propellant is a single grain Mk 18 Mod 0 of ballistite.

Igniter. The igniter is a metal can containing 55 grains of black powder and an electric squib. Two lead wires from the squib extend from the igniter passing through the perforation in the propellant grain to the nozzle where they are connected to the electrical cable and igniter plug (connector).

Head			Motor			Fuze		Velocity (fps)	Use
Dia. (in)	Mark & Mod	Fillers	Dia. (in)	Mark & Mods	Propellant grain	Nose	Base		
5.0	Mk 6 Mods	TNT	5.0	Mk 10 Mods	Mk 18 Mod 0	Mk 149 Mod 0 or 1	Mk 164 Mod 0	1,325	Service
5.0	Mk 6 Mod 4	TNT	5.0	Mk 10 Mods	Mk 18 Mod 0	Mk 149 Mod 0	Mk 164 Mod 0	1,325	Service
5.0	Mk 6 Mod	Plaster	5.0	Mk 10 Mods	Mk 18 Mod 0	None	None	1,325	Practice
5.0	Mk 6 Mods	Plaster	5.0	Mk 2 Mod 3	None	None	None	None	Drill
5.0	Mk 25 Mod 1	Comp B	5.0	Mk 10 Mods	Mk 18 Mod 0	Mk 149 Mod 0	None	1,325	Service (AP)

Army Complete Round Nomenclature	Rocket, HE, 5", HVAR	Rocket, HE, 5", HVAR	Rocket, HE, 5", HVAR, AT	Rocket, Practice, 5", HVAR	Rocket, Dummy, 5", HVAR
Navy Complete Round Nomenclature	5" Rocket, Mk 4 Mod 0 (aircraft general purpose)	5" Rocket, Mk 28 Mod 4 (aircraft general purpose)	5" Rocket, Mk 32 Mod 1 (aircraft, HEAT)	5" Rocket, Mk 5 Mod 0 (aircraft practice)	5" Rocket, Mk 6 Mod 0 (aircraft dummy)
HEAD- Mark & Mod Length (in.) Diameter (in.) Weight (lb.) Filler Weight (lb.)	Mk 6 Mod 4 16.73 5.0 45.5 7.5 TNT	Mk 6 Mods 16.73 5.0 45.5 7.5 TNT	Mk 25 Mod 1 ----- ----- ----- 7.5 COMP B	Mk 6 Mods 16.73 5.0 45.5 7.5 Plaster	Mk 6 Mods 16.73 5.0 45.5 7.5 plaster
MOTOR-Mark & Mod Length (in.) Diameter (in.) Weight (lb.) Model of Propellant Propellant weight (lb.)	Mk 10 Mod 6 ----- 5.0 ----- Mk 18 Mod 0 23.9	Mk 10 Mod 6 52.0 5.0 89.3 Mk 18 Mod 0 23.9	Mk 10 Mods 52.0 5.0 89.3 Mk 18 Mod 0 23.9	Mk 10 Mod 6 52.0 5.0 89.3 Mk 18 Mod 0 23.9	Mk 10 Mod 6 52.0 5.0 89.3 Mk 18 Mod 0 23.9
FUZG-type, Mark and Mod	Nose: VT, M403 or M403E2 Base: Mk 164 Mods	Nose: Mk 149 Mod 0 or 1 Base: Mk 164 Mod 0	Nose: Mk 149 Mod 0 Base: None	None	None
ROCKET (assembled) Length (in.) Weight (lb.) Velocity (max) (fps)	68.6 ----- 1360	68.6 134.0 1,325	68.6 134.0 1,325	68.6 134.0 1,325	68.6 109.0

Reference: TM 9-1950, *Rockets*, July 1945