

SUBCALIBER INBORE TRAINING DEVICE



.50 Caliber Inbore Device

Functional Description:

The device is installed into the breech of the Abrams 120mm cannon. It consists of a single shot bolt-action receiver, solenoid actuated trigger, which is activated through a single connection on the right side of the Breechblock assembly and interfaces with and utilizes the vehicles firing circuits. In operation, the device provides full crew interaction and utilizes the Abrams fire control system.

Purpose of Trainer:

This device (known as the .50 caliber Advanced Inbore Marksmanship Training Enhancement System for Tanks – AIMTEST) is an integral component to the Combined Arms Training Strategy (CATS) for Abrams Tank Crew Gunnery Training to conduct sustainment and remedial training.

Physical Information:

The device is a heavy .50 caliber bolt-action receiver and barrel encased in a precision machined, 120mm casing. The barrel is a standard Browning M2HB machinegun barrel. It fires all standard NATO .50 caliber ammunition to include M962 Saboted Light Armor Penetrator – Tracer (SLAP-T)

Major Components:

- a. Assembly, Barrel, 120mm
- b. Assembly, Receiver
- c. Assembly, Bolt
- d. Assembly, Trigger 24 volts DC (vdc)
- e. Assembly, Electrical Lead (120mm by type gun)
- f. Assembly, Anti-Roll & Counter Recoil Assist (ARCRA)
- g. Tray, Ammunition 2 ea. (120mm by type tank)

Equipment Data:

Caliber.....	50 BMG (12.7x99mm)
System of Operation.....	Manual
Type of Action.....	Bolt Action, Single Shot
Length.....	59 Inches
Width.....	6 5/8 Inches
Height.....	9 3/4 Inches
Weight (Barrel Assembly).....	59 Lbs
Weight (Receiver/Bolt/Trigger Assy).....	17 Lbs
Weight (Total Shipping in Box).....	141 Lbs
Barrel Length.....	45 In
Muzzle Velocity.....	4000 fps with M962 SLAP-T
Muzzle Velocity.....	3050 fps with M20 API-T
Maximum Effective Range.....	2000 meters w/ M962 SLAP-T
Maximum Effective Range.....	1500 Meters with M20 API-T
Trigger Pull.....	20 Lbs

Trigger Assembly (SOLENOID):

Weight.....	4 lbs
Width.....	5.2 inches
Height.....	3.4 inches
Operational Voltage Range.....	22 -28 volts DC

DVC 17-277

Operational Amperage Range.....2 – 8 Amps
Operational Temperature Range.....-46 to +60 Celsius
Operational Force.....Maximum 52 daN (116 lbs) Normal 45 daN (100 lbs)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Training Category/Level Utilized:

Abrams Tank Gunnery

Training Requirements Supported:

(Information not available)

Applicable Publications:

(Information not available)

Reference Publications:

(Information not available)

Source & Method of obtaining

Available through the supporting Training Support Center

Logistic Responsible Command, Service, or Agency:

PM Ground Combat Systems