

NDIA ARMAMENT SYSTEMS FORUM, APRIL 2016

MORTAR AMMUNITION ACROSS THE GLOBE

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Editor, IHS Jane's Weapons: Ammunition

SCOPE:

- Guidance systems for PGMs (Precision Guided Munitions)
 - Self-homing
 - GPS (Global Positioning System)
 - SAL (Semi-Active Laser)
 - INS (Inertial Navigation System)
- Purpose-designed PGMs vs PGKs (Precision Guidance Kits)
- Developments elsewhere in the World
- Other developments in mortar bombs

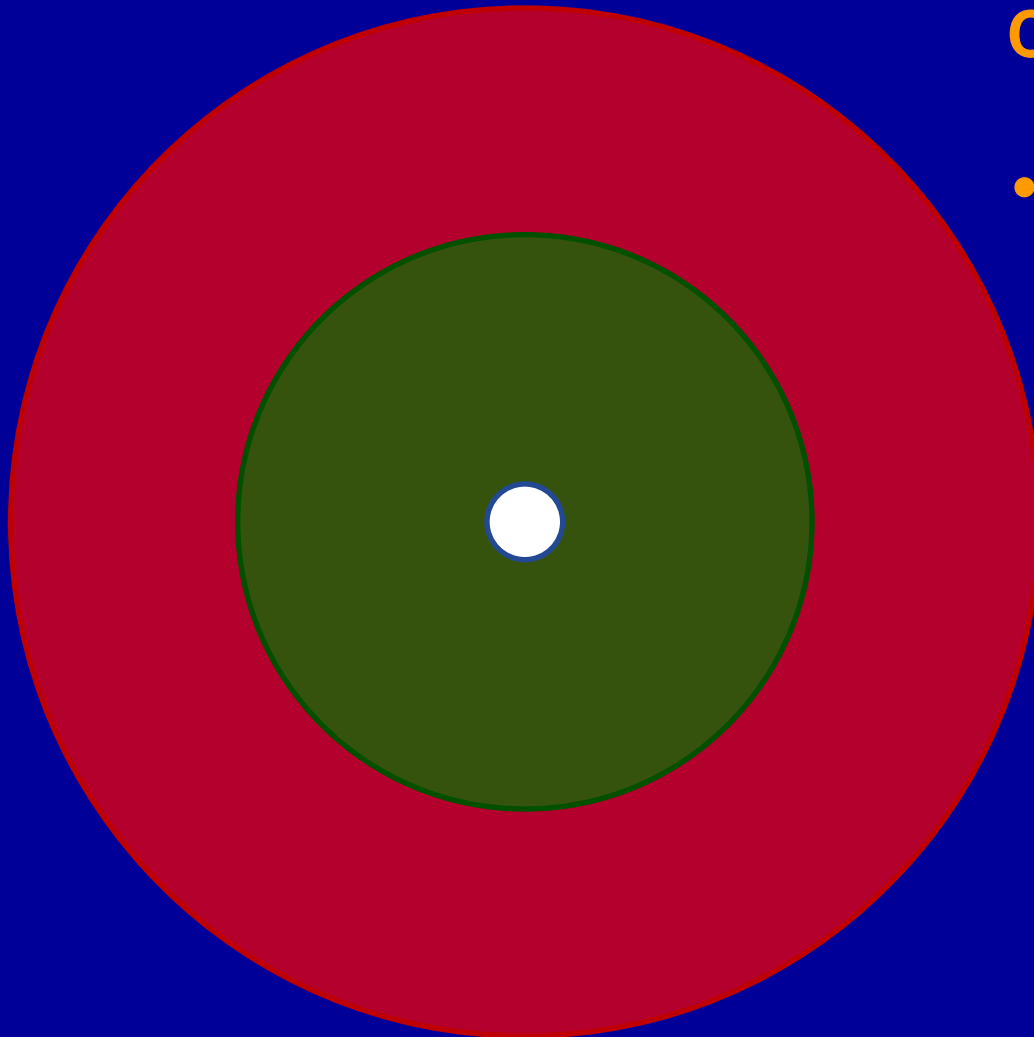
Increased Accuracy

Circular Error Probable:

Conventional

Precision location

GPS



136 m

76 m

10 m (or less)

PURPOSE-DESIGNED PGMs



← IMI GMB
(Guided Mortar
Bomb)



← IMI /
Raytheon GMM
(Guided Mortar
Munition)

IAI Fireball →



XM395: Two versions (and counting)



↑ PGMM
(Precision Guided Mortar Munition)

↓ APMI
(Accelerated Precision Mortar Initiative)



US PROGRAMS

PGMM = Precision Guided Mortar Munition (XM395)

APMI = Accelerated Precision Mortar Initiative (XM395)

HEGM = High Explosive Guided Mortar (XM395?)

GEFM = Guided Enhanced Fragmentation Mortar (HEGM proposal)

PERM = Precision Extended Range Munition

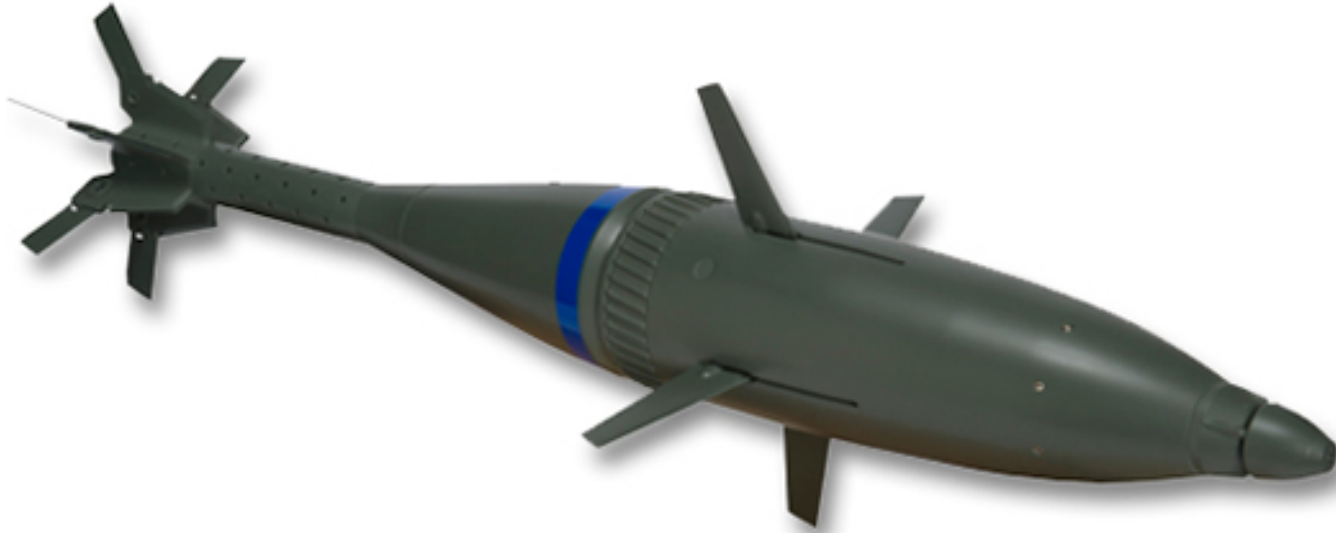
ACERM = Advanced Capability Extended Range Mortar

MGK = Mortar Guidance Kit (ATK)

RCGM = Roll Controlled Guided Mortar (GD)

PAGM = Precision Air-Dropped Guided Munition

OTHER US PGMs



RAYTHEON / IMI
120mm PERM
(Precision
Extended Range
Munition)



GD-OTS / BAE
81mm RCGM
(Roll Controlled
Guided Mortar)

OTHER PRECISION GUIDANCE KITS



EXPAL
GMG 120
(Guided
Mortar
Grenade)



ELBIT LG²MK
(Laser & GPS Guided Mortar Kit)

Krusik CC
(Course Correcting)



NORINCO 120 mm GP4 TCMP (Terminal Correction Mortar Projectile)



KBP 120 mm Gran KM-8



Carfil BAMD-81

(Bomba Asistate de Module Dirijare calibru - 81 mm:
Bomb Assisted Steering Module)



240 mm Smelchak

2S4 Tulpan



Mortar-howitzers



← 2S23 Nona SVK (Russia)

PLL-05 (China) →



Mortar-howitzers: NORINCO Type W01 ammunition



PATRIA NEMO (NEw MOrtar) & AMOS (Advanced MOrtar System)



Polish RAK M120K system (120 mm MAHSW mortar)



OTHER DEVELOPMENTS IN MORTARS

- Insensitive Munitions
- Structure optimised for terminal effects
- Improved aerodynamics
- Rocket assistance
- Multi-function fuzes
- Cargo bombs
- IR illumination
- Non-lethal munitions
- Silent mortars

Structure optimised for terminal effects

1. SAAB 60 mm MAPAM



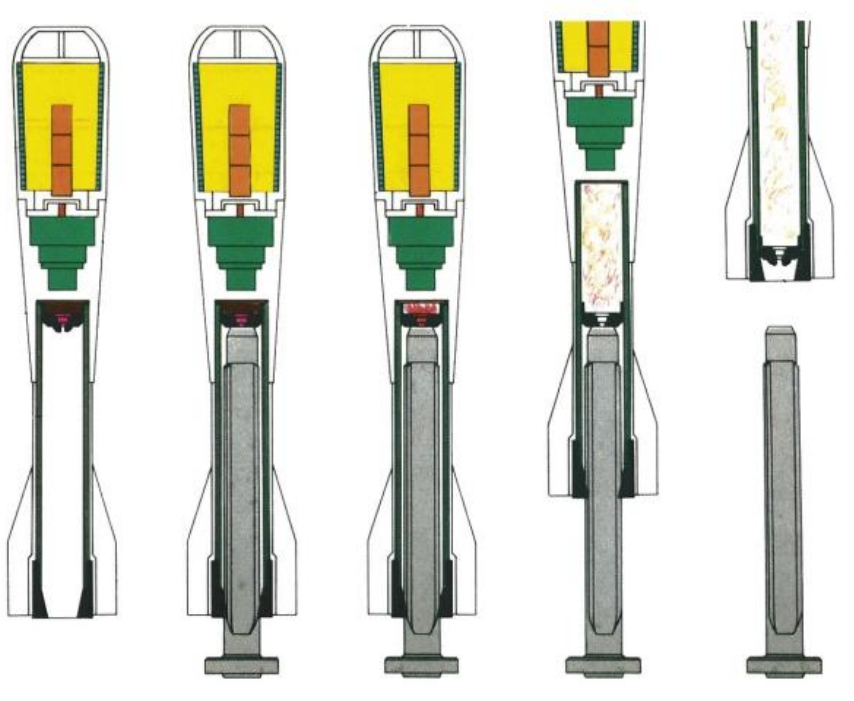
2. ARDEC 81 mm EFC (Enhanced Fragmentation Cartridge)

3. Hirtenberger 60 mm HE Mk 3 ConFrag (Controlled Fragmentation)

OTHER DEVELOPMENTS IN MORTARS

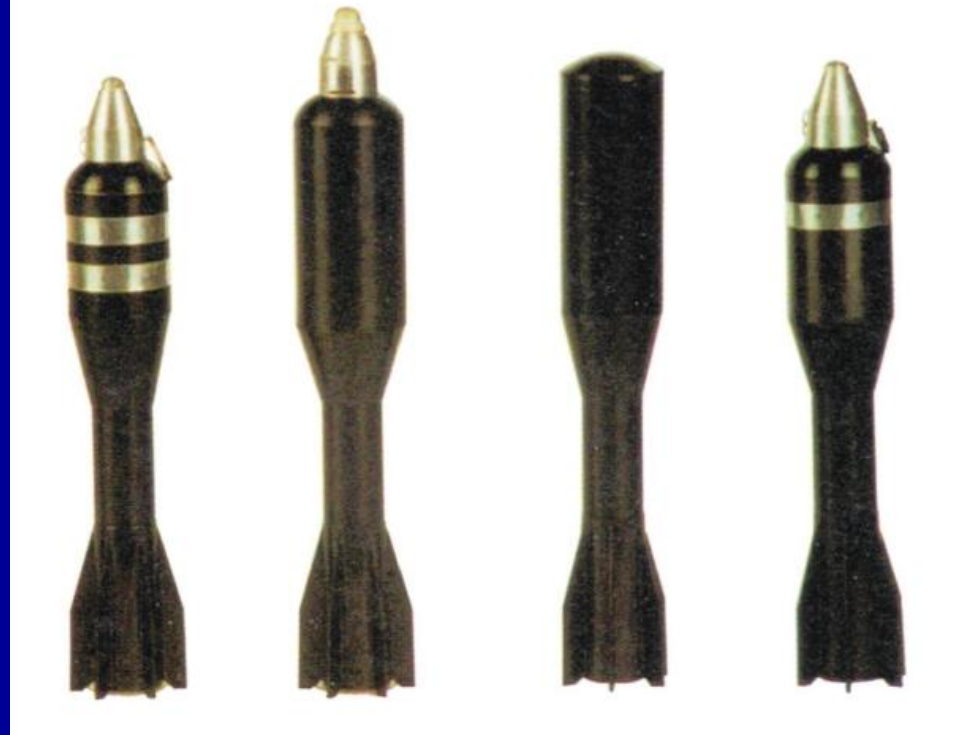
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SILENT MORTARS



51 mm FLY-K ↑

82 mm 3VO35 for 2B25 ↓



50 mm QLT89 ↑



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