MORTAR AMMUNITION ACROSS THE GLOBE

Anthony G Williams
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)

UP PGMM (Precision Guided Mortar Munition)

DOWN 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)
Mortar-howitzers

PLL-05 (China) ➔

2S23 Nona SVK (Russia) ➔
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)
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SILENT MORTARS

51 mm FLY-K  

50 mm QLT89  

82 mm 3VO35 for 2B25
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