PeK AFS | Autonomous Fire Systems

# AMFS-81

## Autonomous Mortar Fighting System 81mm

Distributed, autonomous fire support for decision-speed warfare

- **No crew at firing position**
- **Fully autonomous fire cycle (including misfire handling)**
- **Distributed multi-node fire architecture**
- **Native integration into tactical C2 (STANAG-compatible)**
- **Low-signature electric UGV platform**

A fully autonomous, distributed mortar system designed to deliver indirect fire at the speed of frontline decision-making — without exposing personnel to the weapon.

# Reliable Protection Where Conventional Systems Fail

## DRONE THREAT REALITY

- Drone-saturated environment
- Continuous counter-battery threat
- Seconds-level sensor-to-shooter cycles
- Deep (10–20 km) dynamic combat zone

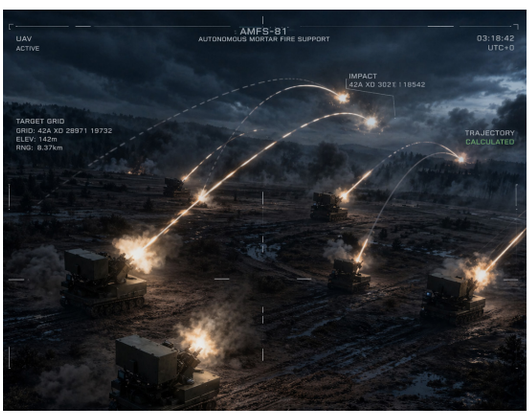
## LIMITATIONS OF EXISTING SYSTEMS

- Crew exposed at weapon
- Centralized fire control delays
- Static or predictable firing positions
- High-value targets (easy to destroy)
- Logistics-heavy deployment

## AMFS-81 SYSTEM

**Autonomous distributed mortar system built around robotic fire units**

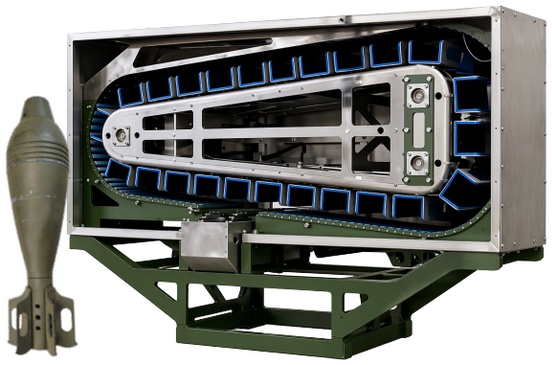
- No personnel at firing position
- Autonomous loading, firing, and misfire handling
- Continuous maneuver (“fire–move loop”)
- Direct integration into squad-level decision loop
- Scalable swarm deployment



- Unloading system – removes mine
- Standard 81 mm barrel.
- Loader – inserts into barrel.
- Recoil compensator
- Storage – 22–44 mines.
- Transmission & control system.

Detect | Decide | Fire | Move | Without crew

## SYSTEM ARCHITECTURE



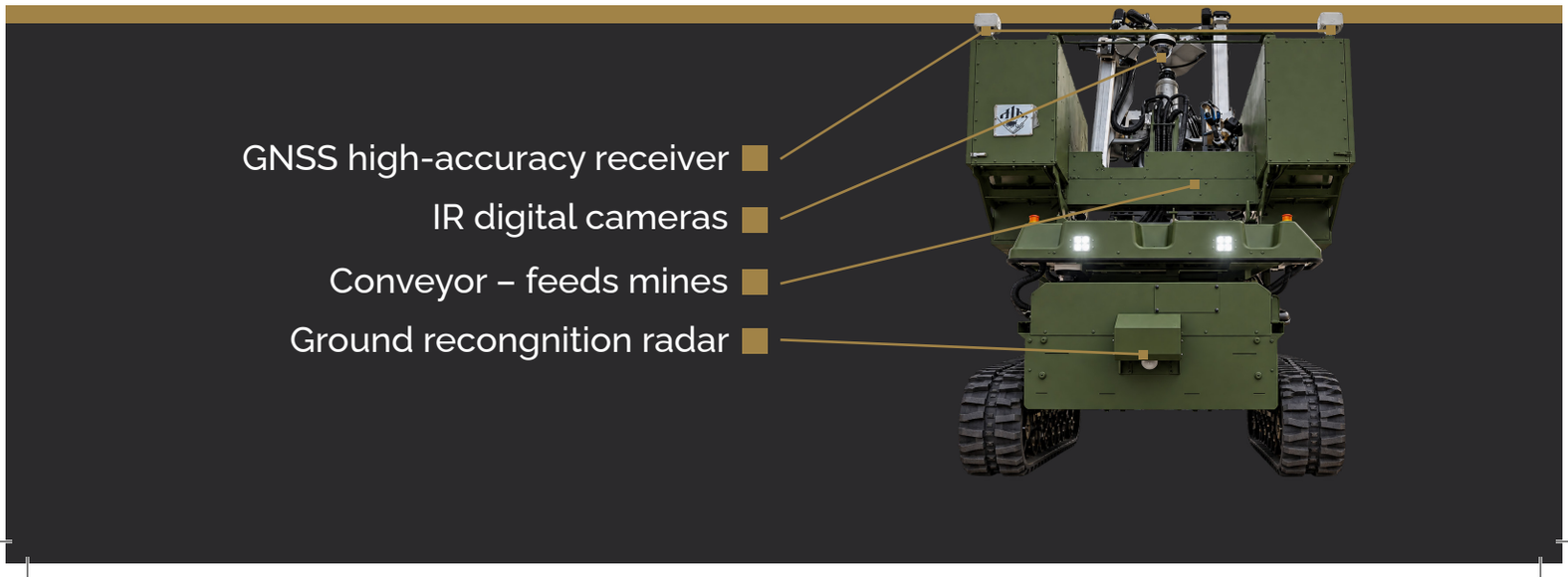
- Autonomous mortar UGV (AMFV)
- Integrated ammunition cartridge (22–44 rounds)
- Dedicated misfire isolation system
- Onboard ballistic computer
- Radar-supported navigation
- Digital C2 connectivity

## OPERATIONAL ADVANTAGES

- No crew exposure, - survivability shift
- Seconds-level fire response (OODA integration)
- Distributed fire = no single target
- Continuous maneuver = counter-battery resistance
- Fleet scalability instead of platform limitation

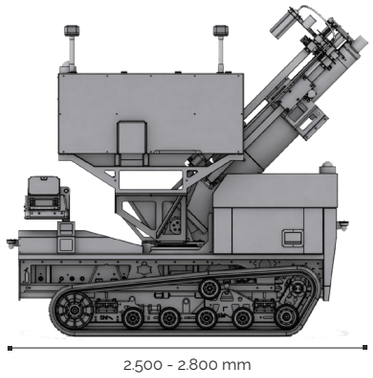
## COMBAT LOGIC

| FROM: | TO: |
|---|---|
| Centralized artillery | Distributed autonomous fire nodes |
| Minutes to fire | Seconds to fire |
| Fixed positions | Continuous movement |



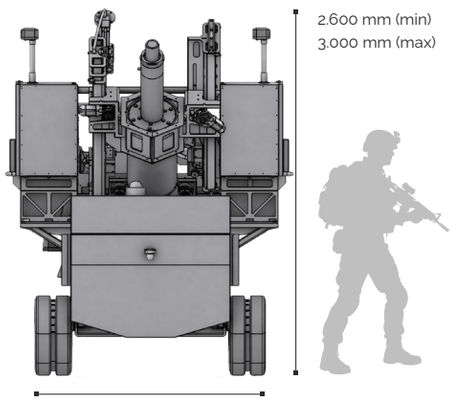
## APPLICATION SCENARIOS

- High-tempo maneuver warfare
- Counter-artillery response
- Urban / semi-urban operations
- Defensive line fire support
- Expeditionary deployment
- Distributed swarm fire doctrine




## DEPLOYMENT CONCEPT

- Distributed autonomous fleet
- Controlled via tactical tablet / GCS
- Integrated into NATO-compatible C2
- Reload at protected logistics node




### KEY PARAMETERS

| | |
|---|---|
| Caliber | 81 mm |
| Ammunition capacity | up to 44 rounds (depends on misfire %) |
| Operation time | up to 8 h (flat terrain) |
| Max speed | up to 10 km/h |
| Azimuthal fire sector | • 360° (with platform reverse) • 45° (with platfrom on place) |
| Elevation fire sector | 45° to 85° |
| Control modes | Autonomous / RC / GCS |
| Propulsion | Electric, 48V |
| Misfire handling | Fully autonomous |

**A new class of robotic artillery.**
Built for survival. Designed for speed. Scaled for robotic war.

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