The 105mm Mobile Weapon System (MWS) is the lightest weight, most highly maneuverable self-propelled howitzer in the world today. The system consists of a U.S. Army standard M20 105mm cannon mounted on an M1152A1w/B2 HMMWV. The weapon includes the application of a digital fire control system and on board communication, eliminating the need for surveyed firing points, aiming circles, and wire lines.

The 105MWS battery is organized to suppress, neutralize, and destroy both ground forces and structures in an indirect and direct fire mode. The system allows the weapon to move, shoot, and move again without relying on heavy equipment or large number of troops/logistic support. The HMMWV platform provides unparalleled off-road mobility over all types of terrain to support this mission.

Overall survivability is enhanced by the strategic deployability and flexibility of the system allowing it to quickly move and relocate (“shoot and scoot”) prior to any adverse effects from counter battery fire and other aggressive offensive engagements.

Simplicity of design allows for a small logistic “footprint”. Crew maintenance is minimal and critical components/assemblies can be simply changed using Line Replacement Units.
**Weapon System**
Hawkeye Howitzer, Light, Modular, M20 Cannon

**Caliber**
105mm (4.13 in)

**Length**
134.75 in. (3.42 m)

**Width**
38.68 in. (.98 m)

**Height**
45.57 in. (1.16 m)

**M20 Cannon w/Breech**
1145 lb.

**Cradle/Recoil Mechanism**
605 lb.

**Total Tipping Parts**
1750 lb.

**Top Carriage Group**
720 lb.

**Total w/o Fire Control**
2470 lb.

**M187A1 Telescope Mount**
45 lb.

**M137A2 Panoramic Telescope**
24 lb.

**MG9000 Digital Fire Control System**
13 lb.

**Total w/Optical Fire Control**
2539 lb.

**Total w/MG9000 Digital Fire Control**
2550 lb.

**Crew Requirements**
4 personnel (Extreme Conditions: 2 personnel)

**Cannon:**
105mm, M20

**Projectile travel**
110 in.

**Caliber**
33

**No. of grooves**
36

**Muzzle brake**
None (Optional Diffuser if Requested – 80 lb. Additional)

**Breech block**
Vertical Sliding Block

**Recoil Mechanism**
Hydro-pneumatic, soft recoil

**Carriage**
Aluminum Alloy

** Traverse limits**
180 degrees (3200 mils) – Possible 360 if Required

**Elevating limits**
-5 to +72 degrees (-89 to 1173 mils)

**Temperature Range**
Lower Limit
-40°F (-40°C)

Upper Limit
+125°F (+52°C)

**Fire Control - Optical**
Panoramic Telescope – M137A2 – Seiler Instruments
Telescope Mount – M187A1 – Seiler Instruments

**Fire Control - Digital (MG 9000)**
- Digital Pointing and Aiming System
Inertial Navigation System (INS) – Model LN-270 - Northrop Grumman
Muzzle Velocity Radar System (MVR5) – Model MVR-700C – Weibel Scientific
Direct Fire Camera System – Model DFS-02 - Sekai Electronics, Inc.
GPS Antenna – Model S67-1575-76 - Sensor Systems Inc.
Gunner’s Display Unit (GDU) – Model DK10 – Mandus – American Reliance, Inc. (AMREL)

**Equivalent Full Charge (EFC)**
6,500 rounds

**M20 105mm Ammunition Compatibility**

- M1 High Explosive Round
- M314 Illumination Round
- M60/M60A2 Smoke Cartridge
- M913 RAP Round
- M760 High Explosive Round
- M1130A1 High Explosive Performed Fragmented Round
- All NATO standard cartridges and fuzes

**M20 Cannon Specifications**

**Rate of Fire**
Maximum: 8 rounds per minute for 3 minutes
Sustained: 3 rounds per minute

**Maximum Firing Range**
Charge 7: 7.2 miles (11.6 Km)
RAP: 12.2 miles (19.5 Km)

**Designated Prime Mover**
M1152A1w/B2 HMMWV

FOR MORE INFORMATION, PLEASE CONTACT US:
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