

Medium Tank (M4A1 Early)

GENERAL DATA

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|-------------------------------------|-----------------|
| Crew: | 5 men |
| Length: Gun forward w/o Sandshields | 230 inches |
| Length: Gun to Rear w/o Sandshields | 230 inches |
| Length: w/o Gun, w/o Sandshields | 230 inches |
| Gun Overhang: Gun forward | 0 inches |
| Width: w/o Sandshields | 103 inches |
| Height: Over Turret hatch | 108 inches |
| Tread: | 83 inches |
| Ground Clearance: | 17 inches |
| Fire Height: | 88 inches |
| Turret Ring Diameter: (inside) | 69 inches |
| Weight Combat Loaded: | 66,800 pounds * |
| Weight Unstowed: | 62,700 pounds* |
| Power to Weight Ratio: Net | 10.5 hp/ton |
| Gross | 12.0 hp/ton |
| Ground Pressure: Zero penetration | 13.7 psi |

*all weights based on T48 or T51 tracks

ARMOR

Type: Turret, cast homogeneous steel; Hull, rolled and cast homogeneous steel; Welded assembly

| Hull Thickness: | Actual | Angled w/Vertical |
|-----------------|--------------------|-------------------|
| Front, Upper | 2.0 inches | 37 to 55 degrees |
| Lower | 2.0 inches | 0 to 45 degrees |
| Sides | 1.5 inches | 0 degrees |
| Rear | 1.5 inches | 0 to 10 degrees |
| Top | 0.75 to 0.5 inches | 90 to 83 degrees |
| Floor, Front | 1.0 inches | 0 degrees |
| Rear | 0.5 inches | 90 degrees |

Turret Thickness:

| | | |
|--------------|------------|------------|
| Gun Shield | 3.0 inches | 0 degrees |
| Rotor Shield | 2.0 inches | 0 degrees |
| Front | 3.0 inches | 30 degrees |
| Sides | 2.0 inches | 5 degrees |
| Rear | 2.0 inches | 0 degrees |
| Top | 1.0 inches | 90 degrees |

ARMAMENT

Primary: 75mm Gun M3 in Mount M34 in Turret*

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|------------------------------|------------------------|
| Traverse: Hydraulic and Manu | 360 degrees |
| Traverse Rate: (max) | 15 seconds/360 degrees |
| Elevation: Manual | -25 to -12 degrees |
| Tiring Rate: (max) | 20 rounds/minute |
| Loading System: | Manual |
| Stabilizer System: | Elevation only |

Secondary:

- (1) .50 caliber MG HB M2 flexible AA mount on turret
- (1) .30 caliber MG M1919A4 coaxial w/75mm gun in turret
- (1) .30 caliber MG M1919A4 in bow mount
- (1) 2 inch smoke Mortar (smoke) fixed in turret
- Provision for (1) .45 caliber SMG M1928A1

*Mount M34A1 in later production tanks

AMMUNITION

| | |
|-------------------------|------------------|
| 97 rounds of 75mm | 12 hand grenades |
| 300 rounds .50 caliber | |
| 600 rounds .45 caliber | |
| 4750 rounds .30 caliber | |

FIRE CONTROL AND VISION EQUIPMENT

| Primary Weapon: | Direct | Indirect |
|--|-----------------------|--|
| Periscope M4 with Telescope M38 | | Azimuth Indicator M19 Gunner's Quadrant M1 Elevation Quadrant M9 |
| Vision Devices: | Direct | Indirect |
| Driver | Hatch and Vision slot | Periscope M6 (1) |
| Asst. Driver | Hatch and Vision slot | Periscope M6 (1) |
| Commander | Hatch | Periscope M6 (1) |
| Gunner | None | Periscope M4 (1) |
| Loader | Pistol Port | Periscope M6 (1) |
| Total Periscopes: M4(1), M6 (6) | | |
| Total Pistol Ports: Hull (0), Turret (1) | | |

ENGINE

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|--------------------------|------------------------------|
| Make and Model: | Continental R975 C1 |
| Type: | 9 cylinder, 4 cycle, radial |
| Cooling System: | Air <u>Ignition:</u> Magneto |
| Displacement: | 973 cubic inches |
| Bore and Stroke: | 5 X 5.5 inches |
| Compression Ratio: | 5.7:1 |
| Net Horsepower (max): | 350 hp at 2400 rpm |
| Gross Horsepower (max): | 400 hp at 2850 rpm |
| Net Torque (max): | 800 ft-lb at 1800 rpm |
| Gross Torque (max): | 890 ft-lb at 1800 rpm |
| Weight: | 1137 lb. dry |
| Fuel: 80 octane gasoline | 175 gallons |
| Engine Oil: | 36 quarts |

POWER TRAIN

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| Clutch: | Dry disc, 2 plate |
| Transmission: | Synchromesh, 5 speeds forward, 1 reverse |
| Gear Ratios: | 1 st 7.56:1 4 th 1.11:1 2 nd 3.11 5 th 0.73:1 3 rd 1.78 Reverse 5.65:1 |
| Steering: | Controlled differential |
| Bevel Gear Ratio: | 3.53:1 Steer Ratio: 1.5515:1 |
| Brakes: | Mechanical, external contracting |
| Final Drive: | Herringbone gear Gear ratio: 2.84:1 |
| Drive Sprocket: | At front of vehicle with 13 teeth |
| Pitch Diameter: | 25.038 inches |

RUNNING GEAR

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| Suspension: | Vertical volute Spring |
| | 12 wheels in 6 bogies (3 bogies/track) |
| Tire Size: | 20 X 9 inches |
| | 6 track return rollers (1 at rear of each bogie) |
| | Adjustable idler at rear of each track |
| Idler Size: | 22 X 9 inches |
| Tracks: | Outside guide: T48, T49, T51, and T54E1 |
| Type: | (T48) Double pin, 16.56 inch width, chevron, rubber (T49) Double pin, 16.56 inch width, parallel bar, steel (T51) Double pin, 16.56 inch width, smooth, rubber (T54E1) Double pin, 16.56 inch width, chevron, steel |
| Pitch: | 6 inches |
| Shoes per Vehicle: | 158 (79/track) |
| Ground Contact Length: | 147 inches |

ELECTRICAL SYSTEM

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| Nominal Voltage: | 24 volts DC |
| Main Generator: | (1) 24 volts, 50 amperes, driven by power take-off from main engine |
| Auxiliary Generator: | (1) 30 volts, 50 amperes, driven by the auxiliary engine |
| Battery: | (2) 12 volts in series |

COMMUNICATIONS

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| Radio: | SCR 508, 528 or 538 in rear of turret; SCR 506* (command tank only) in right front sponson |
| Interphone: | (part of radio) 5 stations |
| Flag Set M238, Panel Set AP50A, Spotlight, Siren | |
| Flares: | 3 each, M17, M18, M19, and m21 (command tanks only) |
| Ground Signals Projector M4 (command tanks only) | |
| *early vehicles may be equipped with SCR 245 | |

FIRE AND GAS PROTECTION

- (2) 10 carbon dioxide, fixed
- (2) 4 pound carbon dioxide, portable
- (2) 1 1/2 Quart decontaminating apparatus

PERFORMANCE

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| Maximum Speed: Sustained, level road | 21 miles/hour |
| Short periods, level | 24 miles/hour |
| Maximum Grade: | 60 percent |
| Maximum Trench: | 7.5 feet |
| Maximum Vertical Wall: | 24 inches |
| Maximum Fording Depth: | 40 inches |
| Minimum Turning Circle: (diameter) | 62 feet |
| Cruising Range: Roads | approx. 120 miles |

