

## Medium Tank (M4A1 Mid war)

### GENERAL DATA

Crew:	5 men
Length: Gun forward w/o Sandshields	232 inches
Length: Gun to Rear w/o Sandshields	232 inches
Length: w/o Gun, w/o Sandshields	232 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:	66,900 pounds *
Weight Unstowed:	62,800 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	3.5 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 M34A1 in Turret

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

### 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:	<u>Direct</u>	<u>Indirect</u>
	Periscope M4 with Telescope M38	Azimuth Indicator M19 Gunner's Quadrant M1 Elevation Quadrant M9
Vision Devices:	<u>Direct</u>	<u>Indirect</u>
Driver	Hatch	Periscope M6 (2)
Asst. Driver	Hatch	Periscope M6 (2)
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

### 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

Clutch:	Dry disc, 2 plate
Transmission:	Synchromesh, 5 speeds forward, 1 reverse
Gear Ratios:	1 <sup>st</sup> 7.56:1      4 <sup>th</sup> 1.11:1 2 <sup>nd</sup> 3.11      5 <sup>th</sup> 0.73:1 3 <sup>rd</sup> 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

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

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

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

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

