



AFV	M1 Abrams	M1A1 Abrams	Merkava IV	Merkava I	M60A1	K2	M48A3 Patton	T-64A
Country:	USA	USA	IDF	IDF	USA	Korea	USA	Russia
Service	1984	1985	2004	1979	1962	2014	1963	1963
Type	MBT	MBT	MBT	MBT	MBT	MBT	MBT	MBT
ER	-15%	-20%	-25%*	-15%	+10:+20%	+5:-10%	+10:+20%	+5:+20%
SR	10%	5%	5%	10%	20%	10%	20%	20%
MPH	45	42	40	29	30	43	28	37
WT	60 tons	63 tons	65 tons	63 tons	52.5 tons	61 tons	53.5 tons	42 tons
Crew	4	4	4	4	4	3	4	3
Water	no	no	no	no	no	no	no	no
RS	66cm	61.5cm	58.8cm	42.5cm	44.1cm	63.1cm	41.1cm	54cm
CC	49.5cm	46.4cm	44.1cm	31.9cm	33.3cm	47.3cm	30.8cm	40.5cm
Reverse	16.5cm	15.4cm	14.7cm	10.6cm	11cm	15.8cm	10.3cm	13.5cm
RIP (rotate)	450°	420°	370°	290°	300°	430°	280°	370°
Main Gun	105mm	120mm	120mm LAHT†	105mm	105mm	120mm	90mm	125mm
Load	Manual	Manual	Manual	Manual	Manual	Auto	Manual	Auto (4/3)
Secondary	7.62mm coax/ 7.62mm roof/ 12.7mm AA	7.62mm coax/ 7.62mm roof/ 12.7mm AA	7.62mm coax/ 7.62 AA/ 12.7mm AA 60mm mortar	7.62mm coax/ 2x 7.62 AA/ External 60mm mortar	7.62mm coax/ 12.7mm AA	7.62mm coax/ 12.7mm AA	7.62mm coax/ 12.7mm AA	7.62mm coax/ 12.7mm AA
ROF	burst	burst	burst	burst	burst	burst	burst	burst
Smoke	2 x 6	2 x 6	2 x 6	no	yes**	2 x 4	2 x 4	2 x 6**
Traverse	420°/phase	420°/phase	400°/phase	400°/phase	225°/phase	400°/phase	240°/phase	300°/phase
Elevation	-9° to +20°	-9° to +20°	-8.5° to +20°	-8.5° to +20°	-10° to +20°	-9° to +20°	-9° to +19°	-6° to +14°
GPS-LOS	yes	yes	yes	no	no	yes	no	no
FCC	yes	yes	yes	yes	no	yes	no	yes
LRF	yes	yes	yes	yes	no	yes	no	yes
GS	yes	yes	yes	yes	no	yes	no	yes
CITV	no	no	yes	no	no	yes	no	no
TIS	no	yes	yes	no	no	yes	no	no
PNV	yes	no	no	yes	yes	no	yes	yes
Turret Face	A 58:38	A 61:38	A 65:65	B 63:60	C 50:40	A 59:45	C 44:35	B 40:35
Turret Flank	B 42:35	A 40:35	A 50:40	B 50:40	C 35:35	A 40:40	D 35:30	C 40:35
Turret Rear	B 40:35	A 38:35	A 50:40	B 50:40	C 32:35	A 40:40	D 30:20	C 35:30
Upper Hull	A 60:40	A 63:40	A 65:66	B 63:60	C 53:40	A 61:45	C 54:20	B 42:40
Lower Hull	A 58:38	A 61:38	A 63:40	B 61:40	C 50:30	A 59:40	C 44:20	B 40:38
Hull Flank	B 40:35	A 40:35	A 48:40	B 45:40	C 30:35	A 40:40	D 15:10	C 35:30
Hull Rear	B 40:35	A 40:15	A 48:40	B 50:40	C 30:35	A 40:40	D 15:10	C 35:30
Deck/Bottom	B	A	A 20:40/A	B	C	A	D	C
Suspension	F	F	F	F	F	F	F	F

\*The engine is located in the front of this MBT. If the front hull is penetrated, the ammunition stowed onboard is not subject to secondary explosion. However, the engine is in jeopardy.

†In addition to the standard array of projectiles (sabot, HEAT, smoke, etc.), the 120mm smooth bore cannon fires the LAHAT ATGM. It is a 105mm laser-guided, tandem warhead antitank missile, that is capable of penetrating 800mm of RHA, with a range of 500-8,000m. Use the penetration data for the PF-98 and follow a missile lock (attack roll) with a TQR save.

\*\*This MBT can generate its own smoke screen by injecting fuel into the exhaust.



AFV	Leopard 2 A6	Challenger 1	BTR-70	BTR-80A	M24	M48	T-10M	M103
Country:	Germany	UK	Russia	Russia	USA	USA	Russia	USA
Service	2001	1983	1972	1994	1944	1953	1957	1957
Type	MBT	MBT	APC	APC	Light Tank	Medium Tank	Heavy Tank	Heavy Tank
ER	-25%	-10:-15%	+10:0%	+10:+5%	+15:+10	+10:+20%	+10:+20%	+10:+20%
SR	3%	10%	20%	20%	20%	20%	20%	20%
MPH	42	35	50	56	35	30	26	21
WT	62 tons	62 tons	13 tons	16 tons	20 tons	49.6 tons	57 tons	65 tons
Crew	4	4	3 + 7	3 + 8	5	4	4	5
Water	no	no	8.2cm	9.1cm	no	no	no	no
RS	61.5cm	51.3cm	73.3cm	82.1cm	51.3cm	44.1cm	38.1cm	30.8cm
CC	46.1cm	38.5cm	55cm	61.6cm	38.5cm	33.3cm	28.6cm	23.1cm
Reverse	15.4cm	12.8cm	18.3cm	20.5cm	12.8cm	11cm	9.5cm	7.7cm
RIP (rotate)	420°	350°	n.a.	n.a.	350°	300°	260°	210°
Main Gun	120mm	120mm	14.5mm KPVT	30mm 2A72	75mm	90mm	122mm	120mm
Load	Manual	Manual	burst	burst	Manual	Manual	Manual	Manual*
Secondary	7.62mm Coax/ 7.62mm AA	7.62mm Coax/ 7.62mm AA	7.62mm coax	7.62mm PKTM coax	7.62mm Coax/bow/ 12.7mm AA	7.62mm Coax/ 12.7mm AA	14.5mm coax/ 12.7mm AA	2x 7.62mm Coax/ 12.7mm AA
ROF	burst	burst	burst	burst	burst	burst	burst	burst
Smoke	2 x 8	2 x 5	no	2 x 3	no	2 x 4	no	no
Traverse	400°/phase	400°/phase	100°/phase	360°/phase	240°/phase	240°/phase	60°/phase	180°/phase
Elevation	-9° to +20°	-10° to +20°	n.a.	-5° to +70°	-10° to +15°	-9° to +19°	-2° to +65°	-8° to +15°
GPS-LOS	yes	yes	no	no	no	no	no	no
FCC	yes	yes	no	no	no	no	no	no
LRF	yes	yes	no	no	no	no	no	no
GS	yes	yes	no	no	no	no	yes	no
CITV	yes	no	no	no	no	no	no	no
TIS	yes	yes	no	no	no	no	no	no
PNV	no	no	no	yes	no	no	yes	yes
Turret Face	A 60:50	A 60:40	F 10:10	E 10:5	F 15:10	D 45:35	C 50:25	D 53:35
Turret Flank	A 42:42	B 45:38	F 10:10	F 10:5	F 10:0	D 35:30	D 30:20	D 55:35
Turret Rear	A 42:42	B 45:38	F 10:10	F 10:5	F 10:0	D 30:20	D 30:20	E 30:20
Upper Hull	A 62:50	A 62:42	F 13:10	D 16:5	F 20:15	C 50:20	C 57:18	D 65:35
Lower Hull	A 60:45	A 60:40	F 10:5	D 14:5	F 18:10	D 45:20	C 55:18	D 50:35
Hull Flank	A 40:40	B 45:38	F	F	F 10:0	D 15:15	E 20:10	E 20:10
Hull Rear	A 40:40	B 45:38	F	F	F 10:0	D 15:15	E 20:10	E 20:10
Deck/Bottom	A 0:30	B	F	F	F	D	E	F
Suspension	F	F	F	F	F	F	F	F

\*The projectile and powder were loaded separately and required two loaders. Regardless of the crew's TQR, reduce the ROF to 1/1.