

Summary Aircraft Data 1976 C172M N904RA

Empty Weight (lbs)	Max T/O Weight (lbs)	Useful Load (lbs)	Fuel Capacity (gals)	Useable Fuel (gals)
1481.20	2300.00	818.80	42	38

Electrical System			Engine	Oil
Alternator	14 V	60 amp	160 HP	Min level = 6 qts
Battery	12 V	25 amp hr	O-320-E2D	Max level = 8 qts

Normal Category Load Factor: +3.8 G to -1.52 G

V – Speeds KIAS:

- V_{NE} = 160
- V_{NO} = 128
- V_{FE} = 85
- V_A (max T/O weight) = 97
- V_Y = 78
- V_X = 59 to clear obs, then 64
- V_G = 65
- V_R = 55
- V_{SO} = 41
- V_{S1} = 47

Standard Traffic Pattern

	Carb Heat	RPM	KIAS	Flaps	Trim
Downwind	ON	2000	85	NONE	As Req
Abeam Touchdown Pt.	ON	1700	80	10 deg	As Reg
Base	ON	1500	70 – 75	20 deg	As Req
Final	ON	1300 – 1200	60/65	30 deg before turning final 40 deg final	As Req

Maximum Crosswind Component = 15 knots @ 90 deg to runway.

GO-AROUND: Full Power, Flaps to 30 deg, pitch for normal climb, positive rate of climb established, flaps up incrementally until reaching traffic pattern altitude.

Maximum Flaps for Forward Slip = 20 deg

Commercial Maneuvers Speeds

Maneuver	Entry Speed KIAS
Chandelles	105
Lazy Eight	105
Steep Turns (45 – 50 deg bank)	95

TAKEOFF DISTANCE

MAXIMUM WEIGHT 2300 LBS

CONDITIONS:
 Flaps Up
 Full Throttle Prior to Brake Release
 Paved, Level, Dry Runway
 Zero Wind

- NOTES:
1. Maximum performance technique as specified in Section 4.
 2. Prior to takeoff from fields above 3000 feet elevation, the mixture should be leaned to give maximum RPM in a full throttle, static runup.
 3. Decrease distances 10% for each 9 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2 knots.
 4. Where distance value has been deleted, climb performance after lift-off is less than 150 fpm at takeoff speed.
 5. For operation on a dry, grass runway, increase distances by 15% of the "ground roll" figure.

WEIGHT LBS	TAKEOFF SPEED KIAS		PRESS ALT FT	0°C		10°C		20°C		30°C		40°C	
	LIFT OFF	AT 50 FT		GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS
2300	52	59	S.L.	775	1380	835	1475	895	1575	960	1685	1030	1795
			1000	850	1510	915	1615	980	1725	1050	1845	1125	1970
	2000	930	1650	1000	1770	1075	1895	1155	2030	1235	2170		
	3000	1020	1815	1100	1945	1180	2085	1270	2235	1360	2395		
	4000	1125	2000	1210	2145	1300	2305	1395	2475	1495	2655		
	5000	1235	2210	1330	2375	1430	2555	1540	2750	1650	2960		
	6000	1365	2450	1470	2640	1580	2850	1700	3070	---	---		
	7000	1505	2730	1625	2955	1750	3190	---	---	---	---		
	8000	1665	3065	1800	3320	---	---	---	---	---	---		

Landing Distance

CONDITIONS:
 Flaps 40°
 Power Off
 Maximum Braking
 Paved, Level, Dry Runway
 Zero Wind

NOTES:

1. Maximum performance technique as specified in Section 4.
2. Decrease distances 10% for each 9 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2 knots.
3. For operation on a dry, grass runway, increase distances by 45% of the "ground roll" figure.

WEIGHT LBS	SPEED AT 50 FT KIAS	PRESS ALT FT	0°C		10°C		20°C		30°C		40°C	
			GRND	TOTAL	GRND	TOTAL	GRND	TOTAL	GRND	TOTAL	GRND	TOTAL
			ROLL	TO CLEAR 50 FT OBS	ROLL	TO CLEAR 50 FT OBS	ROLL	TO CLEAR 50 FT OBS	ROLL	TO CLEAR 50 FT OBS	ROLL	TO CLEAR 50 FT OBS
2300	60	S.L.	495	1205	510	1235	530	1265	545	1295	565	1330
		1000	510	1235	530	1265	550	1300	565	1330	585	1365
		2000	530	1265	550	1300	570	1335	590	1370	610	1405
		3000	550	1300	570	1335	590	1370	610	1405	630	1440
		4000	570	1335	590	1370	615	1410	635	1445	655	1480
		5000	590	1370	615	1415	635	1450	655	1485	680	1525
		6000	615	1415	640	1455	660	1490	685	1535	705	1570
		7000	640	1455	660	1495	685	1535	710	1575	730	1615
		8000	665	1500	690	1540	710	1580	735	1620	760	1665