

C182 Performance Specifications and Limitations

Performance figures given at MAUW and speeds in KIAS unless specified otherwise.

Figures provided are averages and rounded to the safer side, they may not correspond to the exact figures for your particular model.

Structural Limitations

Gross weight (take-off and landing)	2500lbs - 3100lbs
Maximum landing weight	2500lbs -2950lbs
Standard empty weight	1620lbs-1880lbs
Max Baggage allowance in aft compartment	120lbs
Flight load factor (flaps up)	+3.8g – 1.52g
Flight load factor (flaps down)	+3.5g – 0

Engine Specifications

Engine (Lycoming O-470 series) power	230 BHP at 2600 rpm
Oil capacity	12Qts maximum, 9Qts minimum, 10 for normal operations*

*Engineers recommendation to operate on the low side of the minimum oil requirements.

Fuel

Usable fuel	Standard tanks	56 USG (225 litres)
	Long range tanks	75 USG (300 litres)
	Wet Wing	88 USG (300 litres)

Tyre Pressures

Main wheel tyre pressure	42 psi
Nose wheel tyre pressure	49 psi

Maximum Speeds

Never Exceed Speed, (Vne)	167kts (193mph)	(top red line)
Maximum structural cruise speed (Vno)*	140kts , (160mph)	(speed, top of green arc)
Maximum demonstrated crosswind component**		15kts
Maximum maneuvering speed (Va)		111kts (128mph)

*May not be exceeded unless in smooth air conditions

**Late models only

Flap limitation speeds:

Early models	0-40 95kts (110MPH)	
Later models	0-10 140kts (160MPH)	(top of green arc)
	10-40 95kts (110MPH)	(top of white arc)

Stall Speeds

Stall speed, clean (Vs)	58kts (67mph)	(bottom of green arc)
Stall speed, landing config. (Vso)	52kts (60mph)	(bottom of white arc)

Speeds for normal operation

Normal take-off, flaps up	Raise nose at 55kts (60mph), Accelerate 90mph once obstacle cleared	
Normal climb out speed	90-105kts (100-120mph)	
Short field take off, Flaps 20°	lift off 60kts (65mph)*, accelerate Vy when obstacles clear, retract flaps	
Best rate of climb speed	Sea level	75kts (90mph)
	10,000ft	75ks (85mph)
Normal approach flaps 40°	65-70kts, (70-80mph)	
Normal approach flaps up	70-80kts, (80-90mph)	
Short field landing	65kts, (70mph)	

* See notes on short field performance and speeds

Speeds for emergency operation

Engine Failure after take-off	70kts (80mph)	
Forced landing	70kts (80mph) flap up	
	65kts (75mph) flap up	
Precautionary landing	70kts (80mph) flap up,	
	65kts (75mph) full flap	

Cruise Performance*

(Continental O470 series 230hp engines, C182 Skylane)

Cruise at 2500ft pressure altitude	2450 rpm 23"mp, 137KTAS, 14.2gph/ 54lts	
Cruise at 10,000ft pressure altitude	2450rpm, 19"mp 156KTAS, 11.9gph/ 45lts	
Block cruises, recommended performance	2400rpm, 23" or available MP 125kts, 55lt/hr	

*Cruise figures provided from the pilots operating handbook should be used with a contingency factor, block cruises speed and fuel flow allow for contingency and for climb and descent, and are normally applied for planing purposes.