C210 Performance Specifications and Limitations

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

Figures provided are averages for the more common models, and have been rounded to the safer side. Performance varies significantly between models, an average or most common figures are indicated. REMEMBER these figures may not correspond to those for your particular model, ALWAYS Confirm performance and operating requirements in the AFM before flying.

Structural Limitations

Gross weight (take-off and landing)	3400lbs - 4100lbs
Maximum landing weight	3400lbs - 3900lbs
Standard empty weight	2150lbs - 2500lbs
Max Baggage allowance in aft compartment	120-200lbs
Baggage on Folded down 5/6 th seat	120lbs
Rear Compartment with Seat Removed	50lbs
Flight load factor (flaps up)	+3.8g1.52g
Flight load factor (flaps down)	+2.0g – 0g

Engine Specifications

		Max – 5 minutes only	Max Continuous		
Engine (Lycoming IO-52 power	0 series)	300BHP at 2850RPM	285BHP at 2700RPM		
Engine (Lycoming TSIO-520 series) power		310BHP at 2700RPM	285BHP at 2600rpm		
Engine (Lycoming TSIO-520 series) power		325BHP at 2700 maximum contin	325BHP at 2700 rpm, (flat rated) maximum continuous		
Oil capacity		10Qts normally a 11Qts Turbo and engines Do not operate o minimum	aspirated engines, External Filter on less than 7Qts		
Fuel Usable fuel	Standard	tanks	87USG/ 329litres/534lbs		
	Optional L	ong range	115USG		

Fuel					
	Optional ⁻	Tip tanks	Α Τ 1	dditional ank 6 USG/60	in each Tip) litres
	Filler cap of	qty	6	4USG/ 38	34lbs
Landing Gear Pressure					
Main wheel tyre pressure	55 psi				
Nose wheel tyre pressure	50 psi manual)	or 88psi	depen	ding on	type (refer
Nose Strut Pressure	90psi				
Maximum Speeds					
Never Exceed Speed, (Vne)		175-225kts (200-260m	; ph)	(top red l	ine)
Maximum structural crui (Vno)*	se speed	170-210kts (195-240m	; , ph)	(top of gr	een arc)
Maximum demonstrated cro	osswind cor	mponent**		15kts (20	mph)
Maximum manoeuvering sp	eed (Va)			115-135 155 mph)	kts (135 –

*May not be exceeded unless in smooth air conditions **Late models only

Flap Limitation Speeds:

Note: speeds vary significantly	with models.		
Early models 0-10 degrees	140kts (160mph)	(Placarded d Lever)	on Flap
Early models 10-30 degrees	10-30 105kts (120mph)	(top of white	arc)
Later models 0-10 degrees	0-10 150-160kts (175-185mph)	(Placarded d Lever)	on Flap
Later models 10-20 degrees	10-20 130kts (160mph)	(Placarded d Lever)	on Flap
Later models 20-30 degrees	20-30 115kts (120mph)	(top of white	arc)

Gear Limitation Speeds

135-165kts (165-190mph)	Depending on model
135-200kts (165-230mph)	
	135-165kts (165-190mph) 135-200kts (165-230mph)

Stall Speeds

Stall speed, clean (Vs)70-75kts(80-85mph) (bottom of green arc)Stall speed, landing config.60-65kts(70-75mph) (bottom of white arc)(Vso)(Vso)(Vso)(Vso)

Performance for Normal Operations

Takeoff

Normal take-off, flaps up	Raise nose at 55kts (60mph), Accelerate 90mph once obstacle cleared		
Short field take off, Flaps 10 ^o	50ft 75kts, (85mph)* accelerate 80kts, (90m flaps Clear of Obstacles accele	ph) before retracting erate to Vy	
Fuel Placard – Takeoff Fuel flow	2850RPM	2700RPM	
Sea Level	144lbs/hr	138lbs/hr	
4000ft	132lbs/hr	126lbs/hr	
120lbs/hr	114lbs/hr		
92kts (102mph)	Sea level		
97kts (109mph)	10,000ft		
Best Angle of Climb Speed (Vx)	75kts (90mph)		
Normal climb out speed	Initial 90-100kts, (100-115mph)	Enroute kts, (120-140mph) or as req'd for performance	
Normal approach flaps 30°	75-85kts, (90-100mph)		
Normal approach flaps up	80-90kts, (95-105mph)		
Short field landing	75kts, (90mph)		

* See more on short field performance and speeds in the Normal Operations section

Speeds for Emergency Operation

Engine Failure after take-off	85kts (100mph)
Forced landing	3000lbs 75kts (85mph) flap up
	3400lbs 80kts (90mph) flap up
	3800lbs 85kts (100mph) flap up

Precautionary landing	85kts (10 75kts (90	00mph) flap up 0mph) full flap
Cruise Performance*		
(Continental IO520 series 300h	p engines	es, C210 Centurion)
Cruise at 5000ft pressure altitu	de	2400 RPM 23″MP, 148KTAS, 83lbs/hr
Cruise at 10,000ft pressure alti	tude	2400RPM,21″MP, 154KTAS, 79lbs/ hr
Block Planning Figures**		
Block Cruises, recommended performance (Planning)		2400RPM, 23" or available MP 145kts TAS 60lt/hr / 100lbs/hr 4hours safe endurance+reserve
Recommended Minimum Field I (Planning)	_ength	700m Sea Level 900m Above 3000ft Density Altitude

**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 planning purposes.*

****Where field/operations approach these margins performance figures should be consulted to confirm performance**