

CITATION  
CJ1+



# Flight Planning Guide

February 2008



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This Flight Planning Guide is published for the purpose of providing specific information for evaluating the performance of the Cessna Citation CJ1+ (Model 525).

This guide is developed from data contained in the Citation CJ1+ Aircraft Flight Manual and Operating Manual. **This document is not to be used in place of the FAA approved Aircraft Flight Manual or the Operating Manual.** The data included herein does not constitute an offer and is subject to change without notice.

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## SPECIFICATIONS

### General

Certification Status 14 CFR Part 23\*

### Engines

Manufacturer	Williams International	
Model	(2) FJ44-1AP	
Thrust Output at S.L. (each)	1,965 lb	8.74 kN
Flat Rating Temperature	72 °F	22 °C
Overhaul Interval (TBO)	3,500 hours	

### Exterior Dimensions

Length	42 ft 7 in	12.98 m
Height	13 ft 9 in	4.19 m
Wing Span	46 ft 11 in	14.30 m
Landing Gear Wheelbase	15 ft 4 in	4.67 m
Landing Gear Tread	13 ft 0 in	3.96 m

### Internal Dimensions (with typical interior installed)

Length - overall	15 ft 9 in	4.80 m
Length - excluding cockpit	11 ft 0 in	3.35 m
Height	57 in	1.45 m
Width	58 in	1.47 m
Passenger Cabin Volume	198 ft <sup>3</sup>	5.61 m <sup>3</sup>

### Accommodations

Passenger Seats - typical	7	
Baggage Capacity	45 ft <sup>3</sup>	1.27 m <sup>3</sup>
	725 lb	329 kg

### Pressurization

Differential	8.5 psi	0.59 bar
Sea Level Cabin to	22,027 ft	6,714 m
8,000 Foot Cabin at	41,000 ft	12,497 m

### Altitudes

Certified Ceiling	41,000 ft	12,497 m
Service Ceiling - 1 Engine (MTOW)	21,200 ft	6,462 m
Typical Cruise Altitudes	FL 310 - 410	

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\* The Citation CJ1+ is designed to 14 CFR Part 25 standards and certified by 14 CFR Part 23. All takeoff and landing performance is based on Part 25 criteria.

## SPECIFICATIONS

### Basic Performance

Takeoff Distance, Sea Level, ISA, MTOW	3,250 ft	991m
Landing Distance, Sea Level, ISA, MLW	2,590 ft	789 m
Rate of Climb - 2 Engines	3,290 ft/min	1,003 m/min
Rate of Climb - 1 Engine	906 ft/min	276 m/min
Typical Cruise Speeds	360-390 ktas	667-723 km/hr

### Airspeed Limitations

Maximum Operating Limit	M 0.71 Indicated	
$M_{MO}$ (30,500 ft / 9,296 m and above)		
$V_{MO}$ (Sea Level to 30,500 ft / 9,296 m)	263 KIAS	487 km/hr
Maximum Flap Extended Speed ( $V_{FE}$ )		
Takeoff & Approach Position (15°)	200 KIAS	371 km/hr
Land Position (35°)	161 KIAS	298 km/hr
Max Landing Gear Extended Speed ( $V_{LE}$ )	186 KIAS	345 km/hr
Max Landing Gear Oper - Extending ( $V_{LO}$ )	186 KIAS	345 km/hr
Max Landing Gear Oper - Retracting ( $V_{LO}$ )	175 KIAS	324 km/hr
Max. Speed Brake Operation Speed ( $V_{SB}$ )	No limit	No limit
Minimum Control Speed, Air ( $V_{MCA}$ )		
Flaps - 0°	86 KIAS	159 km/hr
Flaps - 15°	77 KIAS	143 km/hr
Minimum Control Speed, Ground ( $V_{MCG}$ )	89 KIAS	165 km/hr

### Certified Weights

Maximum Ramp Weight	10,800 lb	4,899 kg
Maximum Takeoff Weight	10,700 lb	4,853 kg
Maximum Landing Weight	9,900 lb	4,491 kg
Maximum Zero Fuel Weight	8,400 lb	3,810 kg
Maximum Fuel Capacity (6.7 lb/gal)	3,220 lb	1,461 kg

### Basic Operating Weight

Typically-Equipped Empty Weight	6,820 lb	3,093 kg
Single Pilot & Furnishings	200 lb	91 kg
Basic Operating Weight	7,020 lb	3,184 kg

### Payload

Useful Payload and Fuel	3,780 lb	1,715 kg
Maximum Payload	1,380 lb	626 kg
Payload at Full Fuel	560 lb	254 kg

**TAKEOFF PERFORMANCE**

Although the aircraft is certified under 14 CFR Part 23, Cessna publishes all takeoff performance for the Citation CJ1+ using Part 25 criteria. Part 25 defines takeoff distance as the greater of accelerate-stop, accelerate-go with one engine inoperative, or 115% of the all engine takeoff distance to a point 35 feet above the runway. These factors are reflected in the takeoff field lengths presented.

Second segment climb limitations are presented at the bottom of each takeoff field length table. Second segment climb refers to the ability of the aircraft to meet certain climb rates after takeoff with one engine inoperative. Second segment climb limitations are a function of temperature, elevation and aircraft weight.

Two flap settings are shown for the aircraft: 15° and UP. A flap setting of 15° is preferred to minimize runway length and runway speeds. In those situations where second segment climb requirements are too limiting for 15° of flaps, an UP flap setting is available. An UP flap setting requires greater runway length but provides greater second segment climb capability.

A paved, level, dry runway with zero wind is assumed. Runway lengths shown are based on the aircraft's anti-ice systems being off and the cabin bleed air on.

**DECISION, ROTATION & TAKEOFF SAFETY SPEEDS**  
Sea Level, Dry Runway, ISA, Zero Wind, Anti-Ice Off, KIAS

Takeoff Weight (lb)	Flaps 15° Setting			Flaps UP Setting		
	Decision Speed	Rotation Speed	Safety Speed	Decision Speed	Rotation Speed	Safety Speed
	<b>V<sub>1</sub></b>	<b>V<sub>R</sub></b>	<b>V<sub>2</sub></b>	<b>V<sub>1</sub></b>	<b>V<sub>R</sub></b>	<b>V<sub>2</sub></b>
10,700	101	105	111	106	111	119
10,300	99	103	109	104	108	117
9,900	96	100	107	102	106	115
9,500	95	98	105	100	103	113
9,000	96	98	106	97	99	110
8,500	96	98	106	96	98	110
8,000	96	98	107	96	98	110
7,500	96	98	107	96	98	111

## TAKEOFF PERFORMANCE

### TAKEOFF FIELD LENGTH – FLAPS 15°

(Over 35 Foot Screen Height)

Dry Runway, Zero Wind, Anti-Ice Off, Cabin Bleed Air On

<b>Elevation = Sea Level</b>									
Ambient Temp	----- Takeoff Weight (lb) -----								
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
0 / 32	3,060	2,830	2,610	2,480	2,430	2,390	2,350	2,320	
10 / 50	3,180	2,940	2,710	2,580	2,530	2,480	2,440	2,410	
15 / 59	3,250	3,000	2,760	2,630	2,570	2,520	2,480	2,450	
20 / 68	3,310	3,060	2,820	2,680	2,620	2,560	2,520	2,490	
25 / 77	3,530	3,250	2,990	2,750	2,550	2,500	2,450	2,410	
30 / 86	3,990	3,550	3,210	2,950	2,640	2,420	2,360	2,320	
35 / 95	4,470	4,010	3,570	3,160	2,830	2,540	2,300	2,240	
40 / 104	5,110	4,600	4,090	3,590	3,060	2,730	2,450	2,210	
45 / 113	—	5,270	4,740	4,210	3,550	2,960	2,640	2,350	
50 / 122	—	—	—	4,890	4,200	3,530	2,860	2,540	
Climb Wght Temp Limits °C/°F	41/106	45/113	48/118	51/124	54/129	54/129	54/129	54/129	
Field Length at Temp Limits (ft)	5,250	5,270	5,160	5,035	4,760	4,060	3,370	2,720	

<b>Elevation = 1,000 Feet</b>									
Ambient Temp	----- Takeoff Weight (lb) -----								
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
0 / 32	3,190	2,950	2,720	2,580	2,520	2,470	2,430	2,400	
10 / 50	3,320	3,070	2,830	2,680	2,620	2,560	2,520	2,490	
15 / 59	3,390	3,120	2,880	2,730	2,670	2,610	2,560	2,530	
20 / 68	3,520	3,240	2,990	2,750	2,660	2,610	2,560	2,520	
25 / 77	3,900	3,480	3,200	2,940	2,640	2,520	2,470	2,420	
30 / 86	4,390	3,920	3,480	3,150	2,820	2,530	2,380	2,330	
35 / 95	4,920	4,420	3,950	3,500	3,040	2,710	2,430	2,260	
40 / 104	—	5,090	4,560	4,030	3,400	2,920	2,620	2,330	
45 / 113	—	—	5,230	4,680	3,990	3,320	2,820	2,510	
50 / 122	—	—	—	—	4,670	3,970	3,270	2,720	
Climb Wght Temp Limits °C/°F	38/100	42/107	45/113	48/118	52/126	52/126	52/126	52/126	
Field Length at Temp Limits (ft)	5,340	5,370	5,230	5,110	4,960	4,240	3,530	2,810	

**TAKEOFF PERFORMANCE**

**TAKEOFF FIELD LENGTH – FLAPS 15°**

(Over 35 Foot Screen Height)

Dry Runway, Zero Wind, Anti-Ice Off, Cabin Bleed Air On

<b>Elevation = 2,000 Feet</b>									
Ambient Temp	Takeoff Weight (lb)								
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
0 / 32	3,320	3,070	2,820	2,680	2,620	2,570	2,520	2,490	
10 / 50	3,460	3,190	2,930	2,790	2,720	2,670	2,620	2,580	
15 / 59	3,560	3,280	3,020	2,820	2,750	2,690	2,640	2,600	
20 / 68	3,870	3,500	3,220	2,950	2,670	2,610	2,550	2,510	
25 / 77	4,350	3,870	3,450	3,160	2,830	2,530	2,470	2,420	
30 / 86	4,860	4,350	3,870	3,420	3,040	2,710	2,420	2,340	
35 / 95	5,460	4,920	4,390	3,880	3,320	2,910	2,600	2,320	
40 / 104	—	—	5,050	4,490	3,810	3,190	2,800	2,490	
45 / 113	—	—	—	5,170	4,460	3,750	3,070	2,690	
50 / 122	—	—	—	—	—	4,430	3,700	2,970	
Climb Wght Temp Limits °C/°F	36/97	39/102	42/107	45/113	49/120	50/122	50/122	50/122	
Field Length at Temp Limits (ft)	5,600	5,470	5,330	5,170	5,020	4,430	3,700	2,970	

<b>Elevation = 3,000 Feet</b>									
Ambient Temp	Takeoff Weight (lb)								
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
-10 / 14	3,320	3,060	2,820	2,680	2,620	2,570	2,520	2,490	
0 / 32	3,450	3,180	2,930	2,800	2,730	2,670	2,630	2,590	
10 / 50	3,620	3,330	3,060	2,890	2,820	2,760	2,710	2,670	
15 / 59	3,870	3,540	3,250	2,980	2,760	2,700	2,640	2,590	
20 / 68	4,330	3,850	3,470	3,180	2,850	2,620	2,560	2,510	
25 / 77	4,820	4,320	3,830	3,410	3,050	2,720	2,480	2,430	
30 / 86	5,360	4,820	4,300	3,820	3,270	2,910	2,590	2,370	
35 / 95	—	5,460	4,900	4,340	3,690	3,130	2,790	2,480	
40 / 104	—	—	—	5,000	4,280	3,570	3,000	2,670	
45 / 113	—	—	—	—	4,960	4,220	3,490	2,880	
Climb Wght Temp Limits °C/°F	32/90	36/96	39/102	42/108	46/115	47/117	47/117	47/117	
Field Length at Temp Limits (ft)	5,620	5,600	5,440	5,280	5,100	4,490	3,750	3,010	



## TAKEOFF PERFORMANCE

### TAKEOFF FIELD LENGTH – FLAPS 15°

(Over 35 Foot Screen Height)

Dry Runway, Zero Wind, Anti-Ice Off, Cabin Bleed Air On

<b>Elevation = 4,000 Feet</b>									
Ambient Temp	----- Takeoff Weight (lb) -----								
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
-10 / 14	3,460	3,180	2,930	2,790	2,730	2,670	2,620	2,580	
0 / 32	3,600	3,310	3,050	2,920	2,840	2,780	2,730	2,690	
10 / 50	3,910	3,590	3,290	3,020	2,840	2,770	2,710	2,660	
15 / 59	4,330	3,850	3,500	3,210	2,870	2,710	2,640	2,590	
20 / 68	4,820	4,300	3,810	3,430	3,070	2,740	2,570	2,510	
25 / 77	5,340	4,790	4,270	3,770	3,280	2,920	2,600	2,440	
30 / 86	—	5,320	4,760	4,240	3,630	3,130	2,780	2,470	
35 / 95	—	—	5,420	4,840	4,120	3,470	2,990	2,650	
40 / 104	—	—	—	—	4,770	4,030	3,310	2,860	
45 / 113	—	—	—	—	—	4,700	3,940	3,180	
Climb Wght Temp Limits °C/°F	29/84	33/91	36/96	39/102	44/111	45/113	45/113	45/113	
Field Length at Temp Limits (ft)	5,800	5,730	5,560	5,380	5,330	4,700	3,940	3,180	

<b>Elevation = 5,000 Feet</b>									
Ambient Temp	----- Takeoff Weight (lb) -----								
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
-10 / 14	3,610	3,320	3,050	2,910	2,840	2,770	2,720	2,680	
0 / 32	3,790	3,480	3,200	3,010	2,930	2,870	2,810	2,760	
5 / 41	3,980	3,650	3,350	3,070	2,910	2,840	2,780	2,730	
10 / 50	4,370	3,880	3,550	3,250	2,910	2,790	2,720	2,660	
15 / 59	4,830	4,310	3,810	3,460	3,090	2,760	2,650	2,590	
20 / 68	5,340	4,770	4,250	3,750	3,300	2,940	2,620	2,520	
25 / 77	5,890	5,280	4,710	4,190	3,570	3,140	2,790	2,490	
30 / 86	—	—	5,270	4,690	4,010	3,400	2,980	2,640	
35 / 95	—	—	—	5,340	4,590	3,850	3,220	2,840	
40 / 104	—	—	—	—	5,260	4,500	3,730	3,060	
Climb Wght Temp Limits °C/°F	26/79	29/84	33/91	36/97	40/104	42/108	42/108	42/108	
Field Length at Temp Limits (ft)	6,010	5,740	5,680	5,480	5,260	4,770	3,990	3,220	

**TAKEOFF PERFORMANCE**

**TAKEOFF FIELD LENGTH – FLAPS 15°**

(Over 35 Foot Screen Height)

Dry Runway, Zero Wind, Anti-Ice Off, Cabin Bleed Air On

<b>Elevation = 6,000 Feet</b>									
Ambient Temp	Takeoff Weight (lb)								
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
-10 / 14	3,770	3,460	3,180	3,030	2,960	2,890	2,830	2,780	
0 / 32	4,130	3,770	3,450	3,160	2,950	2,880	2,810	2,760	
5 / 41	4,440	3,950	3,620	3,310	2,960	2,850	2,790	2,730	
10 / 50	4,880	4,340	3,840	3,510	3,140	2,800	2,730	2,670	
15 / 59	5,370	4,790	4,250	3,740	3,330	2,970	2,670	2,600	
20 / 68	5,890	5,270	4,700	4,160	3,550	3,160	2,800	2,550	
25 / 77	—	5,790	5,180	4,610	3,950	3,370	2,990	2,640	
30 / 86	—	—	5,790	5,180	4,420	3,750	3,200	2,820	
35 / 95	—	—	—	—	5,080	4,310	3,560	3,030	
40 / 104	—	—	—	—	—	4,990	4,190	3,390	
Climb Wght Temp Limits °C/°F	23/73	26/79	30/86	33/91	38/100	40/104	40/104	40/104	
Field Length at Temp Limits (ft)	6,230	5,910	5,790	5,590	5,510	4,990	4,190	3,390	

<b>Elevation = 7,000 Feet</b>									
Ambient Temp	Takeoff Weight (lb)								
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
-20 / -4	3,780	3,470	3,190	3,020	2,940	2,870	2,820	2,770	
-10 / 14	4,020	3,690	3,380	3,100	3,020	2,940	2,880	2,830	
0 / 32	4,620	4,100	3,730	3,410	3,050	2,890	2,820	2,760	
5 / 41	4,970	4,410	3,920	3,580	3,190	2,870	2,800	2,730	
10 / 50	5,430	4,830	4,280	3,790	3,370	3,010	2,750	2,680	
15 / 59	5,940	5,300	4,710	4,170	3,590	3,190	2,830	2,620	
20 / 68	—	5,800	5,180	4,600	3,930	3,390	3,010	2,650	
25 / 77	—	6,350	5,680	5,060	4,350	3,690	3,200	2,820	
30 / 86	—	—	—	5,720	4,930	4,150	3,490	3,020	
35 / 95	—	—	—	—	5,620	4,810	4,020	3,280	
Climb Wght Temp Limits °C/°F	19/66	23/73	27/80	31/87	35/95	37/99	37/99	37/99	
Field Length at Temp Limits (ft)	6,380	6,130	5,950	5,870	5,620	5,090	4,280	3,470	

## TAKEOFF PERFORMANCE

### TAKEOFF FIELD LENGTH – FLAPS 15°

(Over 35 Foot Screen Height)

Dry Runway, Zero Wind, Anti-Ice Off, Cabin Bleed Air On

<b>Elevation = 8,000 Feet</b>									
Ambient Temp	----- Takeoff Weight (lb) -----								
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
-20 / - 4	3,940	3,620	3,320	3,160	3,080	3,000	2,940	2,890	
-10 / 14	4,450	4,000	3,650	3,350	3,040	2,960	2,880	2,820	
0 / 32	5,170	4,590	4,050	3,680	3,290	2,920	2,830	2,770	
5 / 41	5,540	4,920	4,360	3,860	3,440	3,060	2,820	2,740	
10 / 50	6,030	5,380	4,780	4,220	3,640	3,240	2,870	2,690	
15 / 59	6,570	5,860	5,220	4,630	3,940	3,430	3,040	2,680	
20 / 68	—	6,390	5,710	5,070	4,350	3,680	3,230	2,840	
25 / 77	—	—	—	5,590	4,790	4,090	3,440	3,020	
30 / 86	—	—	—	—	5,470	4,660	3,870	3,240	
35 / 95	—	—	—	—	—	5,350	4,520	3,680	
Climb Wght Temp Limits °C/°F	16/61	20/68	24/75	27/81	32/90	35/95	35/95	35/95	
Field Length at Temp Limits (ft)	6,690	6,390	6,130	5,870	5,760	5,350	4,520	3,680	

<b>Elevation = 9,000 Feet</b>									
Ambient Temp	----- Takeoff Weight (lb) -----								
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
-20 / - 4	4,270	3,910	3,580	3,280	3,100	3,020	2,950	2,890	
-10 / 14	4,990	4,420	3,960	3,610	3,220	2,970	2,900	2,830	
-5 / 23	5,370	4,770	4,210	3,800	3,380	3,010	2,870	2,800	
0 / 32	5,760	5,120	4,530	3,990	3,540	3,150	2,850	2,780	
5 / 41	6,200	5,520	4,900	4,320	3,730	3,310	2,930	2,750	
10 / 50	6,720	5,990	5,330	4,720	4,010	3,500	3,100	2,730	
15 / 59	—	6,500	5,790	5,140	4,400	3,720	3,280	2,880	
20 / 68	—	—	6,280	5,590	4,810	4,090	3,470	3,050	
25 / 77	—	—	—	—	5,360	4,540	3,830	3,260	
30 / 86	—	—	—	—	—	5,220	4,380	3,590	
Climb Wght Temp Limits °C/°F	11/52	16/60	20/68	24/75	29/84	32/90	32/90	32/90	
Field Length at Temp Limits (ft)	6,840	6,610	6,280	6,070	5,930	5,500	4,650	3,800	

**TAKEOFF PERFORMANCE**

**TAKEOFF FIELD LENGTH – FLAPS UP**

(Over 35 Foot Screen Height)

Dry Runway, Zero Wind, Anti-Ice Off, Cabin Bleed Air On

<b>Elevation = Sea Level</b>									
Ambient Temp	-----				-----				
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
0 / 32	3,750	3,440	3,150	2,890	2,580	2,460	2,370	2,320	
10 / 50	3,910	3,580	3,270	3,000	2,680	2,540	2,460	2,410	
15 / 59	3,990	3,660	3,340	3,050	2,730	2,590	2,510	2,450	
20 / 68	4,080	3,730	3,410	3,110	2,780	2,630	2,560	2,490	
25 / 77	4,440	3,980	3,640	3,320	2,960	2,630	2,520	2,430	
30 / 86	5,090	4,450	3,910	3,560	3,170	2,820	2,520	2,410	
35 / 95	5,810	5,110	4,470	3,880	3,410	3,030	2,690	2,410	
40 / 104	6,590	5,870	5,200	4,520	3,750	3,270	2,890	2,570	
45 / 113	7,460	6,760	6,060	5,360	4,500	3,630	3,120	2,770	
50 / 122	—	7,730	6,990	6,270	5,370	4,480	3,580	3,000	
Climb Wght Temp									
Limits °C/°F	48/118	51/124	54/129	54/129	54/129	54/129	54/129	54/129	54/129
Field Length at									
Temp Limits (ft)	8,070	7,940	7,810	7,050	6,110	5,190	4,280	3,350	

<b>Elevation = 1,000 Feet</b>									
Ambient Temp	-----				-----				
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
0 / 32	3,920	3,590	3,280	3,010	2,690	2,540	2,460	2,400	
10 / 50	4,100	3,740	3,420	3,120	2,790	2,630	2,560	2,490	
15 / 59	4,190	3,820	3,490	3,180	2,840	2,680	2,600	2,540	
20 / 68	4,370	3,980	3,630	3,310	2,950	2,700	2,600	2,530	
25 / 77	4,960	4,310	3,900	3,550	3,160	2,810	2,580	2,470	
30 / 86	5,680	4,980	4,330	3,830	3,400	3,020	2,670	2,460	
35 / 95	6,470	5,690	4,990	4,350	3,670	3,250	2,880	2,540	
40 / 104	7,320	6,510	5,810	5,110	4,240	3,510	3,100	2,740	
45 / 113	8,220	7,440	6,710	5,980	5,080	4,180	3,350	2,960	
50 / 122	—	—	7,690	6,920	5,980	5,060	4,130	3,230	
Climb Wght Temp									
Limits °C/°F	46/115	49/120	51/124	52/126	52/126	52/126	52/126	52/126	52/126
Field Length at									
Temp Limits (ft)	8,420	8,260	7,900	7,330	6,370	5,420	4,490	3,540	

## TAKEOFF PERFORMANCE

### TAKEOFF FIELD LENGTH – FLAPS UP

(Over 35 Foot Screen Height)

Dry Runway, Zero Wind, Anti-Ice Off, Cabin Bleed Air On

<b>Elevation = 2,000 Feet</b>									
Ambient Temp	-----				-----				
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
0 / 32	4,090	3,740	3,420	3,120	2,790	2,630	2,560	2,500	
10 / 50	4,280	3,900	3,560	3,250	2,900	2,740	2,660	2,590	
15 / 59	4,420	4,020	3,670	3,340	2,980	2,760	2,690	2,620	
20 / 68	4,920	4,320	3,930	3,580	3,180	2,830	2,650	2,540	
25 / 77	5,620	4,900	4,250	3,850	3,410	3,030	2,680	2,530	
30 / 86	6,390	5,600	4,890	4,240	3,670	3,250	2,870	2,530	
35 / 95	7,240	6,360	5,590	4,890	4,090	3,500	3,090	2,720	
40 / 104	8,140	7,190	6,460	5,730	4,820	3,920	3,330	2,930	
45 / 113	—	8,160	7,390	6,630	5,690	4,760	3,830	3,170	
50 / 122	—	—	—	7,620	6,630	5,660	4,700	3,730	
Climb Wght Temp									
Limits °C/°F	43/109	46/114	49/120	50/122	50/122	50/122	50/122	50/122	
Field Length at									
Temp Limits (ft)	8,740	8,370	8,210	7,620	6,630	5,660	4,700	3,730	

<b>Elevation = 3,000 Feet</b>									
Ambient Temp	-----				-----				
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
-10 / 14	4,080	3,740	3,410	3,120	2,780	2,630	2,560	2,500	
0 / 32	4,270	3,890	3,550	3,240	2,890	2,750	2,670	2,600	
10 / 50	4,500	4,090	3,730	3,400	3,020	2,840	2,760	2,690	
15 / 59	4,900	4,370	3,970	3,610	3,210	2,850	2,710	2,620	
20 / 68	5,590	4,860	4,260	3,870	3,430	3,040	2,710	2,590	
25 / 77	6,350	5,550	4,830	4,170	3,680	3,260	2,880	2,580	
30 / 86	7,180	6,290	5,500	4,790	3,990	3,500	3,090	2,710	
35 / 95	8,090	7,090	6,250	5,520	4,610	3,800	3,330	2,910	
40 / 104	9,090	7,950	7,150	6,390	5,450	4,510	3,610	3,130	
45 / 113	—	—	8,130	7,330	6,350	5,380	4,410	3,440	
Climb Wght Temp									
Limits °C/°F	40/104	43/109	46/115	47/117	47/117	47/117	47/117	47/117	
Field Length at									
Temp Limits (ft)	9,090	8,540	8,340	7,730	6,730	5,740	4,770	3,780	

**TAKEOFF PERFORMANCE**

**TAKEOFF FIELD LENGTH – FLAPS UP**

(Over 35 Foot Screen Height)

Dry Runway, Zero Wind, Anti-Ice Off, Cabin Bleed Air On

<b>Elevation = 4,000 Feet</b>									
Ambient Temp	-----				-----				
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
-10 / 14	4,270	3,890	3,560	3,240	2,890	2,740	2,660	2,600	
0 / 32	4,470	4,070	3,710	3,380	3,010	2,860	2,780	2,710	
10 / 50	4,950	4,440	4,030	3,660	3,250	2,890	2,780	2,700	
15 / 59	5,590	4,850	4,310	3,910	3,460	3,070	2,770	2,650	
20 / 68	6,330	5,520	4,790	4,190	3,710	3,280	2,900	2,650	
25 / 77	7,150	6,250	5,450	4,730	3,980	3,510	3,100	2,720	
30 / 86	8,060	7,040	6,160	5,380	4,500	3,780	3,330	2,920	
35 / 95	9,060	7,900	6,940	6,180	5,230	4,290	3,580	3,130	
40 / 104	—	8,840	7,870	7,070	6,090	5,120	4,150	3,380	
45 / 113	—	—	—	8,050	7,020	6,010	5,010	3,990	
Climb Wght Temp									
Limits °C/°F	37/99	40/104	43/109	45/113	45/113	45/113	45/113	45/113	
Field Length at									
Temp Limits (ft)	9,520	8,840	8,480	8,050	7,020	6,010	5,010	3,990	

<b>Elevation = 5,000 Feet</b>									
Ambient Temp	-----				-----				
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
-10 / 14	4,480	4,080	3,720	3,380	3,010	2,860	2,770	2,700	
0 / 32	4,730	4,300	3,910	3,550	3,160	2,960	2,870	2,790	
5 / 41	5,030	4,520	4,100	3,730	3,310	2,950	2,850	2,770	
10 / 50	5,630	4,880	4,370	3,970	3,510	3,110	2,840	2,710	
15 / 59	6,350	5,520	4,770	4,240	3,740	3,310	2,920	2,710	
20 / 68	7,140	6,230	5,410	4,680	4,010	3,530	3,120	2,740	
25 / 77	8,030	7,000	6,100	5,310	4,420	3,790	3,330	2,920	
30 / 86	9,020	7,850	6,860	5,990	5,030	4,170	3,580	3,130	
35 / 95	—	8,780	7,670	6,830	5,840	4,870	3,930	3,360	
40 / 104	—	—	8,610	7,770	6,740	5,730	4,720	3,700	
Climb Wght Temp									
Limits °C/°F	34/93	37/98	40/104	42/108	42/108	42/108	42/108	42/108	
Field Length at									
Temp Limits (ft)	9,930	9,210	8,610	8,170	7,120	6,090	5,070	4,040	

## TAKEOFF PERFORMANCE

### TAKEOFF FIELD LENGTH – FLAPS UP

(Over 35 Foot Screen Height)

Dry Runway, Zero Wind, Anti-Ice Off, Cabin Bleed Air On

<b>Elevation = 6,000 Feet</b>									
Ambient Temp	-----				-----				
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
-10 / 14	4,700	4,270	3,880	3,530	3,140	2,980	2,890	2,810	
0 / 32	5,270	4,680	4,240	3,850	3,410	3,020	2,880	2,800	
5 / 41	5,740	4,970	4,460	4,040	3,570	3,160	2,890	2,780	
10 / 50	6,410	5,560	4,800	4,300	3,790	3,350	2,960	2,770	
15 / 59	7,180	6,240	5,420	4,670	4,050	3,570	3,150	2,780	
20 / 68	8,030	6,990	6,080	5,270	4,360	3,810	3,350	2,940	
25 / 77	8,990	7,810	6,800	5,920	4,940	4,080	3,580	3,130	
30 / 86	10,110	8,730	7,590	6,630	5,610	4,650	3,840	3,350	
35 / 95	—	—	8,490	7,520	6,480	5,470	4,460	3,610	
40 / 104	—	—	—	8,510	7,430	6,370	5,330	4,270	
Climb Wght Temp									
Limits °C/°F	31/88	34/93	37/99	40/104	40/104	40/104	40/104	40/104	
Field Length at									
Temp Limits (ft)	10,420	9,590	8,890	8,510	7,430	6,370	5,330	4,270	

<b>Elevation = 7,000 Feet</b>									
Ambient Temp	-----				-----				
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
-20 / -4	4,710	4,270	3,890	3,540	3,140	2,970	2,880	2,800	
-10 / 14	5,050	4,570	4,150	3,760	3,340	3,050	2,950	2,870	
0 / 32	6,010	5,200	4,610	4,170	3,680	3,260	2,940	2,810	
5 / 41	6,550	5,680	4,890	4,390	3,870	3,410	3,010	2,830	
10 / 50	7,270	6,310	5,460	4,690	4,100	3,620	3,190	2,840	
15 / 59	8,110	7,030	6,100	5,280	4,380	3,850	3,380	2,960	
20 / 68	9,040	7,830	6,800	5,900	4,910	4,120	3,610	3,150	
25 / 77	10,110	8,720	7,570	6,580	5,510	4,570	3,850	3,360	
30 / 86	—	9,790	8,460	7,360	6,270	5,250	4,280	3,600	
35 / 95	—	—	9,470	8,270	7,190	6,130	5,080	4,020	
Climb Wght Temp									
Limits °C/°F	28/82	31/87	35/95	37/99	37/99	37/99	37/99	37/99	
Field Length at									
Temp Limits (ft)	11,060	10,040	9,470	8,690	7,580	6,500	5,430	4,360	

**TAKEOFF PERFORMANCE**

**TAKEOFF FIELD LENGTH – FLAPS UP**

(Over 35 Foot Screen Height)

Dry Runway, Zero Wind, Anti-Ice Off, Cabin Bleed Air On

<b>Elevation = 8,000 Feet</b>									
Ambient Temp	-----				Takeoff Weight (lb) -----				
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
-20 / - 4	4,930	4,470	4,060	3,690	3,270	3,110	3,010	2,930	
-10 / 14	5,740	4,990	4,510	4,090	3,610	3,190	2,970	2,880	
0 / 32	6,850	5,930	5,110	4,530	3,990	3,510	3,100	2,870	
5 / 41	7,430	6,440	5,560	4,770	4,190	3,690	3,250	2,900	
10 / 50	8,260	7,150	6,190	5,340	4,460	3,920	3,440	3,010	
15 / 59	9,170	7,930	6,870	5,940	4,930	4,160	3,650	3,190	
20 / 68	10,210	8,790	7,610	6,600	5,500	4,540	3,890	3,390	
25 / 77	11,700	9,790	8,440	7,320	6,130	5,110	4,190	3,610	
30 / 86	—	—	9,460	8,190	6,980	5,920	4,860	3,890	
35 / 95	—	—	—	9,150	7,950	6,840	5,740	4,640	
Climb Wght Temp									
Limits °C/°F	25/77	28/82	32/89	35/95	35/95	35/95	35/95	35/95	
Field Length at									
Temp Limits (ft)	11,700	10,550	9,940	9,150	7,950	6,840	5,740	4,640	

<b>Elevation = 9,000 Feet</b>									
Ambient Temp	-----				Takeoff Weight (lb) -----				
°C / °F	10,700	10,300	9,900	9,500	9,000	8,500	8,000	7,500	
-20 / - 4	5,460	4,870	4,400	3,990	3,530	3,140	3,040	2,940	
-10 / 14	6,560	5,680	4,920	4,440	3,910	3,450	3,040	2,900	
-5 / 23	7,170	6,200	5,350	4,680	4,120	3,620	3,190	2,920	
0 / 32	7,790	6,740	5,820	5,000	4,330	3,800	3,340	2,950	
5 / 41	8,520	7,370	6,370	5,490	4,570	4,010	3,510	3,070	
10 / 50	9,410	8,130	7,030	6,070	5,020	4,250	3,720	3,250	
15 / 59	10,430	8,970	7,740	6,700	5,570	4,590	3,950	3,440	
20 / 68	11,910	9,920	8,530	7,380	6,150	5,110	4,200	3,650	
25 / 77	—	11,110	9,500	8,190	6,850	5,750	4,730	3,900	
30 / 86	—	—	—	9,160	7,770	6,650	5,550	4,440	
Climb Wght Temp									
Limits °C/°F	21/70	25/77	28/82	31/88	32/90	32/90	32/90	32/90	
Field Length at									
Temp Limits (ft)	12,200	11,110	10,210	9,380	8,170	7,030	5,910	4,780	



## CLIMB PERFORMANCE

**CRUISE CLIMB**  
ISA, Zero Wind, Anti-Ice Off

<b>Time, Fuel, and Distance To Climb *</b>						
Pressure Altitude (ft)		----- Takeoff Weight (lb) -----				
		10,700	10,000	9,000	8,000	7,000
15,000	Min	5	5	4	4	3
	Lb	153	141	124	109	94
	NM	21	20	17	15	13
21,000	Min	8	8	7	6	5
	Lb	220	202	178	156	134
	NM	35	32	28	25	21
25,000	Min	11	10	9	7	6
	Lb	272	250	219	191	164
	NM	48	44	39	33	29
27,000	Min	12	11	10	8	7
	Lb	298	273	239	208	178
	NM	55	51	44	38	33
29,000	Min	13	12	11	9	8
	Lb	323	295	258	224	192
	NM	63	57	50	43	37
31,000	Min	15	14	12	10	9
	Lb	348	317	277	240	205
	NM	71	64	56	48	41
33,000	Min	17	15	13	11	10
	Lb	374	340	296	256	219
	NM	80	72	62	54	46
35,000	Min	19	17	15	12	11
	Lb	402	364	316	272	232
	NM	90	81	70	60	50
37,000	Min	21	18	16	13	11
	Lb	427	385	332	285	243
	NM	100	89	76	65	55
39,000	Min	23	20	17	15	12
	Lb	454	408	349	299	253
	NM	112	99	83	71	59
41,000	Min	27	23	19	16	13
	Lb	493	436	370	314	265
	NM	129	112	93	77	64

\* Based on the climb starting from sea level.

**CRUISE PERFORMANCE**

**HIGH SPEED CRUISE**  
ISA, Anti-Ice Off

<b>Cruise Speed &amp; Fuel Flow</b>							
Pressure Altitude (ft)		----- Cruise Weight (lb) -----					
		10,500	10,000	9,500	9,000	8,000	7,000
5,000	KTAS	279	279	279	279	279	279
	Lb/Hr	1,215	1,209	1,204	1,199	1,189	1,181
10,000	KTAS	300	300	300	300	300	300
	Lb/Hr	1,181	1,175	1,170	1,164	1,155	1,146
15,000	KTAS	323	323	323	323	323	323
	Lb/Hr	1,172	1,166	1,160	1,155	1,145	1,136
21,000	KTAS	354	354	354	354	354	354
	Lb/Hr	1,162	1,156	1,150	1,145	1,136	1,127
23,000	KTAS	366	366	366	366	366	366
	Lb/Hr	1,166	1,160	1,154	1,148	1,137	1,127
25,000	KTAS	377	377	377	377	377	377
	Lb/Hr	1,174	1,169	1,163	1,157	1,146	1,136
27,000	KTAS	380	381	382	383	385	386
	Lb/Hr	1,122	1,122	1,122	1,123	1,123	1,124
29,000	KTAS	385	386	387	388	390	391
	Lb/Hr	1,078	1,079	1,079	1,080	1,080	1,081
31,000	KTAS	386	387	388	389	391	393
	Lb/Hr	1,013	1,014	1,015	1,016	1,019	1,021
33,000	KTAS	381	383	384	386	388	391
	Lb/Hr	922	925	927	928	932	935
35,000	KTAS	380	382	383	385	387	389
	Lb/Hr	856	857	858	859	861	862
37,000	KTAS	377	380	381	383	386	388
	Lb/Hr	789	789	790	790	791	791
39,000	KTAS	366	370	373	377	381	384
	Lb/Hr	704	705	707	708	710	711
41,000	KTAS	352	359	364	368	376	380
	Lb/Hr	633	635	636	638	641	643

## CRUISE PERFORMANCE

### LONG RANGE CRUISE

ISA, Anti-Ice Off

<b>Cruise Speed &amp; Fuel Flow</b>							
Pressure Altitude (ft)		----- Cruise Weight (lb) -----					
		10,500	10,000	9,500	9,000	8,000	7,000
5,000	KTAS	203	199	194	186	176	166
	Lb/Hr	761	733	699	654	590	531
10,000	KTAS	218	214	209	205	187	178
	Lb/Hr	730	703	676	648	563	508
15,000	KTAS	234	229	225	219	209	189
	Lb/Hr	704	676	648	621	565	483
21,000	KTAS	256	250	244	239	227	209
	Lb/Hr	675	645	616	589	533	465
23,000	KTAS	264	257	251	245	233	217
	Lb/Hr	666	635	605	576	521	459
25,000	KTAS	271	265	259	252	239	226
	Lb/Hr	654	625	596	567	511	457
27,000	KTAS	279	273	267	261	248	234
	Lb/Hr	643	614	587	560	504	450
29,000	KTAS	285	282	276	269	256	241
	Lb/Hr	629	607	580	552	498	443
31,000	KTAS	289	287	284	279	264	249
	Lb/Hr	610	590	570	548	490	436
33,000	KTAS	298	292	287	284	273	257
	Lb/Hr	605	576	552	532	484	429
35,000	KTAS	309	303	296	288	279	266
	Lb/Hr	604	577	547	518	473	423
37,000	KTAS	317	312	307	301	284	275
	Lb/Hr	597	571	547	520	462	418
39,000	KTAS	314	319	323	313	298	281
	Lb/Hr	569	560	555	522	465	409
41,000	KTAS	337	330	324	320	312	293
	Lb/Hr	598	567	537	515	470	410

**DESCENT PERFORMANCE**

**HIGH SPEED & NORMAL DESCENT**  
ISA, Zero Wind, Anti-Ice Off,  
Speed Brakes Retracted, Gear & Flaps Up

		<b>Time, Fuel, and Distance To Descend *</b>					
		<b>High Speed – 3,000 FPM</b>			<b>Normal – 2,000 FPM</b>		
Pressure Altitude (ft)		----- End of Cruise Weight (lb) -----			----- End of Cruise Weight (lb) -----		
		9,000	8,000	7,000	9,000	8,000	7,000
15,000	Min	5	5	5	8	8	8
	Lb	25	25	26	70	66	64
	NM	23	23	23	35	35	35
21,000	Min	7	7	7	11	11	11
	Lb	38	37	38	99	94	91
	NM	34	34	34	51	51	51
25,000	Min	8	8	8	13	13	13
	Lb	47	46	47	119	113	109
	NM	42	42	42	63	63	63
29,000	Min	10	10	10	15	15	15
	Lb	57	56	56	140	133	128
	NM	50	50	50	75	75	75
31,000	Min	10	10	10	16	16	16
	Lb	63	61	62	152	144	138
	NM	54	54	54	82	82	82
33,000	Min	11	11	11	17	17	17
	Lb	69	68	68	164	155	149
	NM	59	59	59	88	88	88
35,000	Min	12	12	12	18	18	18
	Lb	76	73	73	175	166	158
	NM	63	63	63	95	95	95
37,000	Min	12	12	12	19	19	19
	Lb	82	79	78	187	176	168
	NM	67	67	67	101	101	101
39,000	Min	13	13	13	20	20	20
	Lb	88	84	83	198	186	177
	NM	72	72	72	108	108	108
41,000	Min	14	14	14	20	21	21
	Lb	94	89	88	208	196	185
	NM	76	76	76	113	114	114

\* Based on descending to sea level.

## RESERVE FUEL

### RESERVE FUEL ALLOWANCES

Based on 3 Passengers, ISA, Zero Wind

#### VFR Fuel Reserves (at 15,000 feet)

Day (30 minutes)	279 lb
Night (45 minutes)	426 lb

#### IFR Fuel Reserves (Alternate plus 45 minutes at 15,000 feet)

100 Nautical Mile Alternate	738 lb
200 Nautical Mile Alternate	957 lb
300 Nautical Mile Alternate	1,143 lb

#### NBAA IFR Reserves \*

100 Nautical Mile Alternate	655 lb
200 Nautical Mile Alternate	870 lb
300 Nautical Mile Alternate	1,055 lb

\*NBAA IFR Reserves are defined as the amount of fuel for the following profile:

- A 5 minute approach at sea level
- Climb to 5,000 feet
- A 5 minute hold at 5,000 feet
- Climb to cruise altitude for the diversion to the alternate airport
- Cruise at long range cruise power
- Descend to sea level
- Land with 30 minutes of holding fuel at 5,000 feet.

## HOLDING PERFORMANCE

ISA, Anti-Ice Off, Speed Brakes Retracted, Gear & Flaps Up

Holding Speed & Fuel Flow								
Weight (lb)	KIAS	----- Pressure Altitude (ft) -----						
		S.L.	5,000	10,000	15,000	20,000	25,000	30,000
10,000	160	647	625	604	584	566	549	534
9,000	150	584	562	544	528	510	492	478
8,000	140	523	502	485	470	456	438	425
7,000	130	466	445	428	414	399	385	374

**LANDING PERFORMANCE**

**LANDING DISTANCE – ACTUAL**

(Distance from 50 Feet Above the Runway)

Flaps Land, Dry Runway, Zero Wind, Anti-Ice On or Off

<b>Elevation = Sea Level</b>									
Ambient Temp	-----				Landing Weight (lb)	-----			
°C / °F	9,900	9,700	9,500	9,300	8,900	8,500	8,000	7,500	
0 / 32	2,510	2,470	2,440	2,410	2,340	2,280	2,200	2,120	
10 / 50	2,570	2,530	2,500	2,470	2,400	2,330	2,250	2,160	
15 / 59	2,590	2,560	2,530	2,490	2,420	2,360	2,270	2,190	
20 / 68	2,630	2,590	2,560	2,520	2,460	2,390	2,300	2,210	
25 / 77	2,660	2,620	2,590	2,560	2,480	2,420	2,330	2,240	
30 / 86	2,690	2,660	2,620	2,590	2,510	2,450	2,360	2,270	
35 / 95	2,730	2,690	2,650	2,620	2,540	2,470	2,390	2,290	
40 / 104	2,780	2,720	2,680	2,650	2,570	2,500	2,410	2,320	
45 / 113	2,830	2,750	2,710	2,680	2,600	2,530	2,440	2,340	
50 / 122	2,880	2,800	2,740	2,710	2,630	2,560	2,470	2,370	
Lndg Wght Temp Limits °C/°F	50/122	52/126	54/129	54/129	54/129	54/129	54/129	54/129	
V <sub>REF</sub> (KIAS)	109	108	107	106	103	101	98	95	

<b>Elevation = 1,000 Feet</b>									
Ambient Temp	-----				Landing Weight (lb)	-----			
°C / °F	9,900	9,700	9,500	9,300	8,900	8,500	8,000	7,500	
0 / 32	2,570	2,530	2,500	2,470	2,400	2,330	2,250	2,160	
10 / 50	2,630	2,590	2,560	2,530	2,460	2,390	2,300	2,210	
15 / 59	2,660	2,620	2,590	2,560	2,480	2,420	2,330	2,240	
20 / 68	2,690	2,660	2,620	2,590	2,510	2,450	2,360	2,270	
25 / 77	2,730	2,690	2,650	2,620	2,550	2,470	2,390	2,290	
30 / 86	2,780	2,720	2,690	2,650	2,580	2,500	2,410	2,320	
35 / 95	2,840	2,760	2,720	2,680	2,610	2,530	2,440	2,350	
40 / 104	2,890	2,810	2,750	2,710	2,640	2,560	2,470	2,370	
45 / 113	2,940	2,860	2,780	2,740	2,670	2,590	2,500	2,400	
50 / 122	—	—	2,820	2,770	2,700	2,620	2,530	2,430	
Lndg Wght Temp Limits °C/°F	48/118	49/120	51/124	52/126	52/126	52/126	52/126	52/126	
V <sub>REF</sub> (KIAS)	109	108	107	106	103	101	98	95	

## LANDING PERFORMANCE

### LANDING DISTANCE – ACTUAL

(Distance from 50 Feet Above the Runway)

Flaps Land, Dry Runway, Zero Wind, Anti-Ice On or Off

<b>Elevation = 2,000 Feet</b>									
Ambient Temp	-----				Landing Weight (lb)	-----			
°C / °F	9,900	9,700	9,500	9,300	8,900	8,500	8,000	7,500	
0 / 32	2,630	2,600	2,560	2,530	2,460	2,390	2,310	2,220	
10 / 50	2,690	2,660	2,620	2,590	2,520	2,450	2,360	2,270	
15 / 59	2,740	2,690	2,650	2,620	2,550	2,470	2,390	2,290	
20 / 68	2,790	2,720	2,690	2,650	2,580	2,500	2,410	2,320	
25 / 77	2,840	2,760	2,720	2,680	2,610	2,540	2,440	2,350	
30 / 86	2,900	2,810	2,750	2,720	2,640	2,570	2,470	2,380	
35 / 95	2,950	2,870	2,790	2,750	2,670	2,600	2,500	2,400	
40 / 104	3,010	2,920	2,830	2,780	2,700	2,630	2,530	2,430	
45 / 113	3,070	2,970	2,880	2,810	2,730	2,660	2,560	2,460	
50 / 122	—	—	—	2,850	2,760	2,690	2,590	2,490	
Lndg Wght Temp Limits °C/°F	45/113	46/115	48/118	50/122	50/122	50/122	50/122	50/122	
V <sub>REF</sub> (KIAS)	109	108	107	106	103	101	98	95	

<b>Elevation = 3,000 Feet</b>									
Ambient Temp	-----				Landing Weight (lb)	-----			
°C / °F	9,900	9,700	9,500	9,300	8,900	8,500	8,000	7,500	
-10 / 14	2,630	2,600	2,560	2,530	2,460	2,390	2,310	2,220	
0 / 32	2,700	2,660	2,630	2,590	2,520	2,450	2,360	2,270	
10 / 50	2,790	2,730	2,690	2,650	2,580	2,510	2,420	2,320	
15 / 59	2,850	2,760	2,720	2,680	2,610	2,540	2,440	2,350	
20 / 68	2,900	2,820	2,760	2,720	2,640	2,570	2,470	2,380	
25 / 77	2,960	2,870	2,790	2,750	2,670	2,600	2,500	2,400	
30 / 86	3,020	2,930	2,840	2,780	2,710	2,630	2,530	2,430	
35 / 95	3,080	2,980	2,890	2,820	2,740	2,660	2,560	2,460	
40 / 104	3,140	3,040	2,950	2,860	2,770	2,690	2,590	2,490	
45 / 113	—	—	3,000	2,910	2,800	2,720	2,620	2,520	
Lndg Wght Temp Limits °C/°F	42/108	44/111	45/113	47/117	47/117	47/117	47/117	47/117	
V <sub>REF</sub> (KIAS)	109	108	107	106	103	101	98	95	

**LANDING PERFORMANCE**

**LANDING DISTANCE – ACTUAL**

(Distance from 50 Feet Above the Runway)

Flaps Land, Dry Runway, Zero Wind, Anti-Ice On or Off

<b>Elevation = 4,000 Feet</b>									
Ambient Temp	-----				Landing Weight (lb)	-----			
°C / °F	9,900	9,700	9,500	9,300	8,900	8,500	8,000	7,500	
-10 / 14	2,700	2,660	2,630	2,590	2,520	2,450	2,360	2,270	
0 / 32	2,800	2,730	2,690	2,660	2,580	2,510	2,420	2,320	
10 / 50	2,910	2,820	2,760	2,720	2,640	2,570	2,480	2,380	
15 / 59	2,960	2,880	2,790	2,750	2,670	2,600	2,500	2,400	
20 / 68	3,030	2,930	2,850	2,790	2,710	2,630	2,540	2,430	
25 / 77	3,090	2,990	2,900	2,820	2,740	2,660	2,570	2,460	
30 / 86	3,160	3,050	2,960	2,870	2,770	2,700	2,600	2,490	
35 / 95	3,220	3,110	3,010	2,920	2,810	2,730	2,630	2,520	
40 / 104	—	3,180	3,070	2,970	2,840	2,760	2,660	2,550	
45 / 113	—	—	—	—	2,870	2,790	2,690	2,580	
Lndg Wght Temp Limits °C/°F	39/102	41/106	42/108	44/111	45/113	45/113	45/113	45/113	
V <sub>REF</sub> (KIAS)	109	108	107	106	103	101	98	95	

<b>Elevation = 5,000 Feet</b>									
Ambient Temp	-----				Landing Weight (lb)	-----			
°C / °F	9,900	9,700	9,500	9,300	8,900	8,500	8,000	7,500	
-10 / 14	2,800	2,730	2,690	2,660	2,580	2,510	2,420	2,330	
0 / 32	2,910	2,830	2,760	2,720	2,650	2,570	2,480	2,380	
5 / 41	2,970	2,880	2,800	2,760	2,680	2,600	2,510	2,410	
10 / 50	3,030	2,940	2,850	2,790	2,710	2,630	2,540	2,440	
15 / 59	3,100	3,000	2,910	2,820	2,740	2,670	2,570	2,460	
20 / 68	3,160	3,060	2,960	2,870	2,780	2,700	2,600	2,500	
25 / 77	3,230	3,120	3,020	2,930	2,810	2,730	2,630	2,530	
30 / 86	3,310	3,190	3,080	2,990	2,850	2,760	2,660	2,560	
35 / 95	3,380	3,260	3,150	3,040	2,880	2,800	2,690	2,590	
40 / 104	—	—	—	3,100	2,910	2,830	2,730	2,620	
Lndg Wght Temp Limits °C/°F	36/97	38/100	39/102	41/106	42/108	42/108	42/108	42/108	
V <sub>REF</sub> (KIAS)	109	108	107	106	103	101	98	95	



## LANDING PERFORMANCE

### LANDING DISTANCE – ACTUAL

(Distance from 50 Feet Above the Runway)

Flaps Land, Dry Runway, Zero Wind, Anti-Ice On or Off

<b>Elevation = 6,000 Feet</b>									
Ambient Temp	-----				Landing Weight (lb)	-----			
°C / °F	9,900	9,700	9,500	9,300	8,900	8,500	8,000	7,500	
-10 / 14	2,920	2,830	2,760	2,730	2,650	2,580	2,480	2,380	
0 / 32	3,040	2,950	2,860	2,790	2,720	2,640	2,540	2,440	
5 / 41	3,110	3,010	2,910	2,830	2,750	2,670	2,570	2,470	
10 / 50	3,170	3,070	2,970	2,880	2,780	2,700	2,600	2,500	
15 / 59	3,240	3,130	3,030	2,940	2,810	2,730	2,630	2,530	
20 / 68	3,320	3,200	3,090	2,990	2,850	2,770	2,670	2,560	
25 / 77	3,390	3,270	3,160	3,050	2,880	2,800	2,700	2,590	
30 / 86	3,470	3,340	3,220	3,120	2,920	2,840	2,730	2,620	
35 / 95	—	3,420	3,290	3,180	2,970	2,870	2,760	2,650	
40 / 104	—	—	—	—	3,030	2,900	2,800	2,680	
Lndg Wght Temp Limits °C/°F	33/91	35/95	37/99	38/100	40/104	40/104	40/104	40/104	40/104
V <sub>REF</sub> (KIAS)	109	108	107	106	103	101	98	95	

<b>Elevation = 7,000 Feet</b>									
Ambient Temp	-----				Landing Weight (lb)	-----			
°C / °F	9,900	9,700	9,500	9,300	8,900	8,500	8,000	7,500	
-20 / -4	2,910	2,830	2,760	2,730	2,650	2,580	2,480	2,380	
-10 / 14	3,040	2,950	2,860	2,800	2,720	2,640	2,550	2,440	
0 / 32	3,180	3,080	2,980	2,890	2,790	2,710	2,610	2,500	
5 / 41	3,250	3,140	3,040	2,940	2,820	2,740	2,640	2,530	
10 / 50	3,330	3,210	3,100	3,000	2,850	2,770	2,670	2,560	
15 / 59	3,400	3,280	3,170	3,060	2,890	2,810	2,700	2,590	
20 / 68	3,490	3,350	3,230	3,120	2,930	2,840	2,740	2,620	
25 / 77	3,570	3,430	3,310	3,190	2,980	2,880	2,770	2,660	
30 / 86	3,660	3,510	3,380	3,260	3,040	2,910	2,800	2,690	
35 / 95	—	—	—	3,330	3,100	2,950	2,840	2,720	
Lndg Wght Temp Limits °C/°F	30/86	32/90	34/93	35/95	37/99	37/99	37/99	37/99	37/99
V <sub>REF</sub> (KIAS)	109	108	107	106	103	101	98	95	

**LANDING PERFORMANCE**

**LANDING DISTANCE – ACTUAL**

(Distance from 50 Feet Above the Runway)

Flaps Land, Dry Runway, Zero Wind, Anti-Ice On or Off

<b>Elevation = 8,000 Feet</b>									
Ambient Temp	Landing Weight (lb)								
°C / °F	9,900	9,700	9,500	9,300	8,900	8,500	8,000	7,500	
-20 / -4	3,040	2,950	2,860	2,800	2,720	2,640	2,550	2,450	
-10 / 14	3,190	3,080	2,980	2,890	2,790	2,710	2,610	2,510	
0 / 32	3,340	3,220	3,110	3,010	2,860	2,780	2,680	2,570	
5 / 41	3,420	3,290	3,180	3,070	2,890	2,810	2,710	2,600	
10 / 50	3,500	3,370	3,250	3,130	2,940	2,840	2,740	2,630	
15 / 59	3,580	3,440	3,320	3,200	2,990	2,880	2,770	2,660	
20 / 68	3,680	3,530	3,390	3,270	3,050	2,920	2,810	2,690	
25 / 77	3,770	3,610	3,470	3,340	3,110	2,950	2,840	2,730	
30 / 86	—	—	3,550	3,410	3,170	2,990	2,880	2,760	
35 / 95	—	—	—	—	3,240	3,030	2,910	2,790	
Lndg Wght Temp Limits °C/°F	27/81	29/84	31/88	32/90	35/95	35/95	35/95	35/95	35/95
V <sub>REF</sub> (KIAS)	109	108	107	106	103	101	98	95	

**STALL SPEEDS**

Zero Angle of Bank, Landing Gear Up or Down, KCAS

Weight (lb)	<b>Stall Speeds</b>		
	Flap Position		
	Land	15°	Up
10,700	86	92	98
10,300	85	90	97
9,900	83	88	95
9,500	81	87	93
9,000	79	85	91
8,500	77	82	88
8,000	75	80	86
7,500	73	78	83

## MISSION PLANNING

### CRITERIA

The following mission planning table provides flight time and fuel burn statistics for selected distances and altitudes.

Flight time represents the time for the climb, cruise and descent portion of the mission. No allowance has been added for taxi, takeoff, approach, or ATC procedures. Fuel burn represents the total amount of fuel consumed for taxi, takeoff, climb, cruise, and descent. There is a taxi and takeoff allowance of 80 pounds of fuel included in all fuel burn figures. NBAA IFR fuel reserves (100 nm) are considered in each case but are not included in the fuel burn figure.

The mission planning table reflects cruise climb, high-speed cruise, and high-speed descent schedules. Standard day conditions are assumed with zero wind enroute. The effects of wind can be determined from the wind correction factors table below. Apply the wind correction factor to the zero wind flight time and fuel burn to estimate the impact of wind.

Typical cruise altitudes for various distances are:

<u>Distance (nm)</u>	<u>Typical Cruise Altitude (ft)</u>
0 - 99	6,000 - 14,000
100 - 199	15,000 - 27,000
200 - 299	26,000 - 33,000
300 - 499	31,000 - 37,000
500 - 899	37,000 - 41,000
900 +	39,000 - 41,000

<b>Wind Correction Factors *</b>									
True Airspeed (kt)	----- Headwinds (kt) -----					----- Tailwinds (kt) -----			
	100	75	50	25	0	25	50	75	100
280	1.56	1.37	1.22	1.10	1.00	0.92	0.85	0.79	0.74
300	1.50	1.33	1.20	1.09	1.00	0.92	0.86	0.80	0.75
320	1.45	1.31	1.18	1.08	1.00	0.93	0.86	0.81	0.76
340	1.42	1.28	1.17	1.08	1.00	0.93	0.87	0.82	0.77
360	1.38	1.26	1.16	1.07	1.00	0.93	0.88	0.83	0.78
380	1.36	1.25	1.15	1.07	1.00	0.94	0.88	0.84	0.79
400	1.33	1.23	1.14	1.07	1.00	0.94	0.89	0.84	0.80

\* Wind Correction Factor is calculated as KTAS divided by the sum of KTAS ± wind component

**MISSION PLANNING**

**FLIGHT TIME & FUEL BURN**

Dist (nm)	----- Cruise Altitude (ft) -----									
	<b>15,000</b>		<b>25,000</b>		<b>27,000</b>		<b>29,000</b>		<b>31,000</b>	
	Time (min)	Fuel (lb)	Time (min)	Fuel (lb)	Time (min)	Fuel (lb)	Time (min)	Fuel (lb)	Time (min)	Fuel (lb)
100	0:20	440	0:20	399	0:20	394				
200	0:39	799	0:36	708	0:36	690	0:36	670	0:36	651
300	0:58	1,159	0:52	1,018	0:52	987	0:52	952	0:51	917
400	1:16	1,520	1:08	1,331	1:08	1,285	1:07	1,236	1:07	1,183
500	1:35	1,883	1:24	1,644	1:23	1,582	1:23	1,520	1:23	1,449
600	1:53	2,248	1:40	1,958	1:39	1,881	1:38	1,804	1:38	1,716
700			1:56	2,272	1:55	2,181	1:54	2,087	1:54	1,982
800							2:09	2,371	2:09	2,249
900										
1,000										
1,100										
1,200										

Assumptions:

- Cruise climb
- High-speed cruise
- High-speed descent
- ISA, zero winds enroute
- Flight time includes climb, cruise and descent
- Fuel burn includes 80 pounds for taxi and takeoff
- Three passengers @ 200 pounds each, single pilot
- NBAA IFR Reserves - 100 nm (655 lb) Reserves are not included in the fuel burn figures

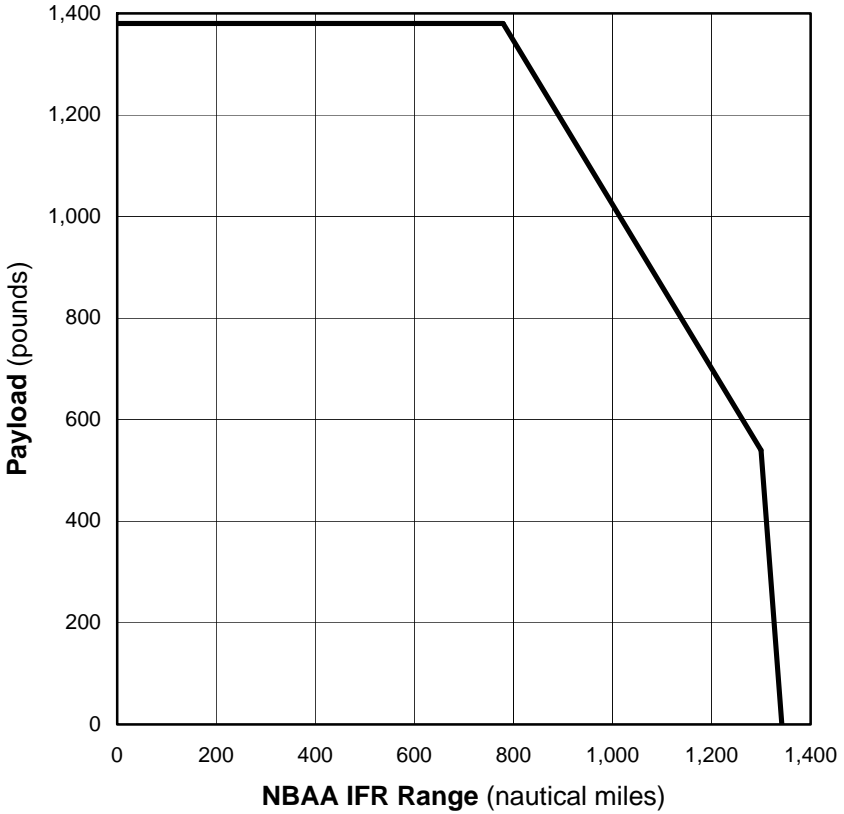
**FOR SELECTED DISTANCES**

----- Cruise Altitude (ft) -----										
<b>33,000</b>		<b>35,000</b>		<b>37,000</b>		<b>39,000</b>		<b>41,000</b>		Dist (nm)
Time (min)	Fuel (lb)	Time (min)	Fuel (lb)	Time (min)	Fuel (lb)	Time (min)	Fuel (lb)	Time (min)	Fuel (lb)	
										100
0:36	630	0:37	615	0:37	604	0:37	592	0:38	587	200
0:52	876	0:53	843	0:53	815	0:53	785	0:54	764	300
1:07	1,121	1:08	1,071	1:08	1,027	1:09	978	1:10	942	400
1:23	1,366	1:24	1,300	1:24	1,238	1:25	1,171	1:27	1,121	500
1:39	1,612	1:40	1,528	1:40	1,450	1:41	1,365	1:43	1,300	600
1:55	1,858	1:56	1,757	1:56	1,663	1:57	1,558	2:00	1,480	700
2:11	2,105	2:12	1,987	2:11	1,875	2:13	1,752	2:16	1,661	800
2:27	2,333	2:27	2,198	2:27	2,069	2:29	1,928	2:33	1,822	900
				2:43	2,283	2:46	2,124	2:50	2,004	1,000
						3:02	2,322	3:07	2,187	1,100
								3:24	2,370	1,200

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**MISSION PLANNING**

**RANGE / PAYLOAD CAPABILITY**  
NBAA IFR Reserves (100 nm), ISA,  
Zero Wind, High-Speed Cruise



Assumptions:  
Single pilot  
Cruise at FL 410





Citation Marketing Cessna Aircraft Company, P.O. Box 7706, Wichita, Kansas  
67277-7706, Telefax 316-517-6640