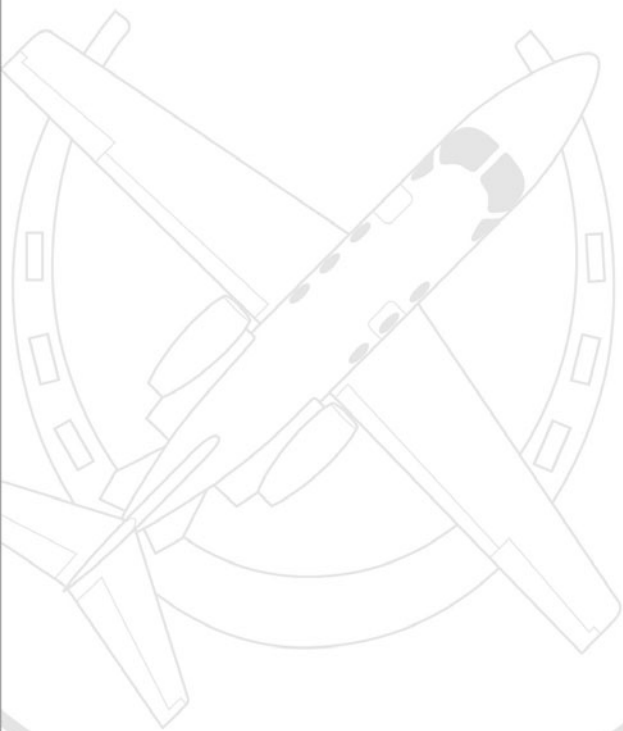


**CITATION**  
**MUSTANG**



# Flight Planning Guide

February 2007



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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 Mustang (Model 510).

This guide is developed from data contained in the Citation Mustang 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 Pratt & Whitney Canada  
Model (2) PW-615F  
Thrust Output at S.L. (each) 1,460 lb 6.49 kN  
Flat Rating Temperature 77 °F 25 °C  
Overhaul Interval (TBO) 3,500 hours

### Exterior Dimensions

Length 40 ft 7 in 12.37 m  
Height 13 ft 5 in 4.09 m  
Wing Span 43 ft 2 in 13.16 m  
Landing Gear Wheelbase 14 ft 4 in 4.37 m  
Landing Gear Tread 11 ft 10 in 3.61 m

### Cabin Dimensions (with typical interior installed)

Length - overall 14 ft 9 in 4.50 m  
Length - excluding cockpit 9 ft 9 in 2.97 m  
Height 54 in 1.37 m  
Width 55 in 1.40 m  
Passenger Cabin Volume 144 ft<sup>3</sup> 4.08 m<sup>3</sup>

### Accommodations

Passenger Seats 5  
Baggage Capacity 63 ft<sup>3</sup> 1.78 m<sup>3</sup>  
718 lb 325 kg

### Pressurization

Differential 8.3 psi 0.57 bar  
Sea Level Cabin to 21,280 ft 6,486 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) 26,900 ft 8,199 m  
Typical Cruise Altitudes FL 350 - 390

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\* The Citation Mustang is certified under 14 CFR Part 23 Normal category rules but all takeoff and landing performance is based on 14 CFR Part 23 Commuter category rules.

## **SPECIFICATIONS**

### **Basic Performance**

Takeoff Distance, Sea Level, ISA, MTOW	3,110 ft	948 m
Landing Distance, Sea Level, ISA, MLW	2,380 ft	725 m
Rate of Climb - 2 Engines	3,010 ft/min	917 m/min
Rate of Climb - 1 Engine	870 ft/min	265 m/min
Typical Cruise Speeds	320 - 345 KTAS	

### **Airspeed Limitations**

Maximum Operating Limit	M 0.63 Indicated	
$M_{MO}$ (27,120 ft / 8,266 m and above)	M 0.63 Indicated	
$V_{MO}$ (Sea Level to 27,120 ft / 8,266 m)	250 KIAS	463 km/hr
Maximum Flap Extended Speed ( $V_{FE}$ )		
Takeoff & Approach (15°)	185 KIAS	343 km/hr
Land (30°)	150 KIAS	278 km/hr
Max Landing Gear Oper - Extending ( $V_{LO}$ )	250 KIAS	463 km/hr
Max Landing Gear Oper - Retracting ( $V_{LO}$ )	185 KIAS	343 km/hr
Max Landing Gear Extended Speed ( $V_{LE}$ )	250 KIAS	463 km/hr
Max. Speed Brake Operation Speed ( $V_{SB}$ )	No limit	No limit
Minimum Control Speed, Air ( $V_{MCA}$ )		
Flaps - 0°	92 KIAS	170 km/hr
Flaps - 15°	81 KIAS	150 km/hr
Minimum Control Speed, Ground ( $V_{MCG}$ )	73 KIAS	135 km/hr

### **Certified Weights**

Maximum Ramp Weight	8,730 lb	3,960 kg
Maximum Takeoff Weight	8,645 lb	3,921 kg
Maximum Landing Weight	8,000 lb	3,629 kg
Maximum Zero Fuel Weight	6,750 lb	3,062 kg
Maximum Fuel Capacity (6.7 lb/gal)	2,580 lb	1,170 kg

### **Basic Operating Weight**

Typically-Equipped Empty Weight	5,350 lb	2,427 kg
Single Pilot & Furnishings	200 lb	91 kg
Basic Operating Weight	5,550 lb	2,518 kg

### **Payload**

Useful Payload and Fuel	3,180 lb	1,442 kg
Maximum Payload	1,200 lb	544 kg
Payload at Full Fuel	600 lb	272 kg

## TAKEOFF PERFORMANCE

The Citation Mustang is certified to 14 CFR Part 23 Normal category rules. Cessna, however, elected to calculate all takeoff performance utilizing 14 CFR Part 23 Commuter category rules because of their higher standard of safety. Therefore, the takeoff distances reflected in the Aircraft Flight Manual and this guide are based on the greater of accelerate-stop distance, engine-out accelerate-go distance, or 115% of the all engine takeoff distance to a point 35 feet above the runway. These factors are incorporated into 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>
8,645	89	89	97	103	104	112
8,000	85	85	93	98	99	108
7,500	83	84	93	94	96	106
7,000	81	84	93	93	96	106
6,500	79	84	94	92	96	107
6,000	79	85	95	90	96	108

## 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	8,645	8,000	7,500	7,000	6,500	6,000
0 / 32	2,990	2,500	2,320	2,220	2,130	2,160
10 / 50	3,070	2,570	2,390	2,290	2,190	2,210
15 / 59	3,110	2,610	2,420	2,320	2,220	2,240
20 / 68	3,150	2,640	2,460	2,360	2,260	2,270
25 / 77	3,190	2,680	2,490	2,390	2,290	2,300
30 / 86	3,380	2,810	2,520	2,410	2,310	2,240
35 / 95	3,820	3,130	2,690	2,420	2,300	2,200
40 / 104	4,440	3,550	3,020	2,570	2,310	2,190
45 / 113	—	4,170	3,460	2,900	2,440	2,190
50 / 122	—	—	4,150	3,380	2,790	2,320
Climb Wght Temp Limits °C/°F	44/111	49/120	50/122	50/122	50/122	50/122
Field Length at Temp Limits (ft)	5,220	4,980	4,150	3,380	2,790	2,320

<b>Elevation = 1,000 Feet</b>						
Ambient Temp	Takeoff Weight (lb)					
°C / °F	8,645	8,000	7,500	7,000	6,500	6,000
0 / 32	3,070	2,570	2,390	2,290	2,190	2,220
5 / 41	3,110	2,600	2,420	2,320	2,230	2,250
10 / 50	3,150	2,640	2,460	2,360	2,260	2,280
15 / 59	3,200	2,680	2,500	2,390	2,290	2,310
20 / 68	3,240	2,730	2,530	2,430	2,330	2,340
25 / 77	3,390	2,830	2,560	2,450	2,350	2,310
30 / 86	3,810	3,130	2,700	2,460	2,350	2,240
35 / 95	4,370	3,520	3,000	2,560	2,350	2,230
40 / 104	5,230	4,050	3,390	2,860	2,410	2,240
45 / 113	—	4,950	3,990	3,280	2,730	2,270
Climb Wght Temp Limits °C/°F	40/104	45/113	47/117	47/117	47/117	47/117
Field Length at Temp Limits (ft)	5,230	4,950	4,330	3,510	2,890	2,390

**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	8,645	8,000	7,500	7,000	6,500	6,000
0 / 32	3,150	2,640	2,460	2,360	2,260	2,280
5 / 41	3,190	2,680	2,500	2,400	2,300	2,310
10 / 50	3,240	2,730	2,540	2,430	2,330	2,350
15 / 59	3,280	2,770	2,580	2,470	2,370	2,380
20 / 68	3,390	2,850	2,610	2,500	2,390	2,360
25 / 77	3,810	3,140	2,720	2,510	2,390	2,290
30 / 86	4,360	3,530	3,010	2,580	2,400	2,280
35 / 95	5,160	4,030	3,380	2,860	2,430	2,280
40 / 104	—	4,760	3,880	3,230	2,690	2,290
45 / 113	—	—	4,710	3,770	3,080	2,530
Climb Wght Temp Limits °C/°F	36/97	41/106	45/113	45/113	45/113	45/113
Field Length at Temp Limits (ft)	5,370	4,970	4,710	3,770	3,080	2,530

<b>Elevation = 3,000 Feet</b>						
Ambient Temp	Takeoff Weight (lb)					
°C / °F	8,645	8,000	7,500	7,000	6,500	6,000
-5 / 23	3,190	2,680	2,500	2,400	2,300	2,320
0 / 32	3,230	2,730	2,540	2,430	2,330	2,350
5 / 41	3,280	2,770	2,580	2,470	2,370	2,380
10 / 50	3,330	2,820	2,610	2,510	2,400	2,410
15 / 59	3,380	2,870	2,660	2,550	2,440	2,420
20 / 68	3,800	3,140	2,740	2,550	2,430	2,330
25 / 77	4,350	3,530	3,020	2,600	2,440	2,320
30 / 86	5,130	4,030	3,390	2,870	2,450	2,320
35 / 95	—	4,720	3,870	3,230	2,700	2,330
40 / 104	—	—	4,570	3,690	3,030	2,510
Climb Wght Temp Limits °C/°F	31/88	37/99	42/108	43/109	43/109	43/109
Field Length at Temp Limits (ft)	5,340	5,090	4,960	4,090	3,300	2,700



## 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	8,645	8,000	7,500	7,000	6,500	6,000
-5 / 23	3,280	2,770	2,580	2,470	2,370	2,390
0 / 32	3,320	2,820	2,620	2,510	2,410	2,420
5 / 41	3,370	2,860	2,660	2,550	2,440	2,450
10 / 50	3,440	2,920	2,700	2,590	2,480	2,450
15 / 59	3,770	3,140	2,750	2,600	2,480	2,380
20 / 68	4,320	3,520	3,020	2,620	2,480	2,370
25 / 77	5,090	4,020	3,400	2,880	2,500	2,360
30 / 86	—	4,700	3,880	3,230	2,710	2,370
35 / 95	—	—	4,530	3,690	3,040	2,520
40 / 104	—	—	—	4,320	3,460	2,820
Climb Wght Temp Limits °C/°F	27/81	33/91	38/100	40/104	40/104	40/104
Field Length at Temp Limits (ft)	5,510	5,260	5,090	4,320	3,460	2,820

<b>Elevation = 5,000 Feet</b>						
Ambient Temp	Takeoff Weight (lb)					
°C / °F	8,645	8,000	7,500	7,000	6,500	6,000
-10 / 14	3,320	2,810	2,620	2,510	2,410	2,420
-5 / 23	3,370	2,860	2,660	2,550	2,440	2,450
0 / 32	3,430	2,910	2,700	2,590	2,480	2,490
5 / 41	3,500	2,970	2,740	2,620	2,510	2,500
10 / 50	3,780	3,160	2,770	2,640	2,530	2,420
15 / 59	4,270	3,500	3,010	2,660	2,530	2,410
20 / 68	5,020	3,990	3,390	2,880	2,540	2,410
25 / 77	—	4,660	3,860	3,240	2,720	2,420
30 / 86	—	—	4,490	3,670	3,040	2,520
35 / 95	—	—	—	4,270	3,450	2,820
Climb Wght Temp Limits °C/°F	23/73	29/84	34/93	38/100	38/100	38/100
Field Length at Temp Limits (ft)	5,640	5,410	5,230	4,770	3,760	3,030

## TAKEOFF PERFORMANCE

### TAKEOFF FIELD LENGTH – FLAPS 15°

(Over 35 Foot Screen Height)

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

Elevation = 6,000 Feet						
Ambient Temp	Takeoff Weight (lb)					
°C / °F	8,645	8,000	7,500	7,000	6,500	6,000
-10 / 14	3,440	2,920	2,700	2,590	2,480	2,470
-5 / 23	3,500	2,970	2,750	2,630	2,520	2,510
0 / 32	3,570	3,020	2,790	2,670	2,560	2,540
5 / 41	3,790	3,200	2,820	2,690	2,580	2,480
10 / 50	4,230	3,480	3,010	2,710	2,580	2,460
15 / 59	4,840	3,900	3,320	2,840	2,590	2,460
20 / 68	—	4,530	3,790	3,190	2,690	2,460
25 / 77	—	5,430	4,380	3,620	3,010	2,520
30 / 86	—	—	5,230	4,160	3,390	2,780
35 / 95	—	—	—	4,980	3,900	3,140
Climb Wght Temp Limits °C/°F	19/66	25/77	30/86	36/97	36/97	36/97
Field Length at Temp Limits (ft)	5,630	5,430	5,230	5,210	4,040	3,230

Elevation = 7,000 Feet						
Ambient Temp	Takeoff Weight (lb)					
°C / °F	8,645	8,000	7,500	7,000	6,500	6,000
-15 / 5	3,560	3,020	2,740	2,620	2,510	2,460
-10 / 14	3,630	3,070	2,790	2,660	2,550	2,490
-5 / 23	3,690	3,130	2,830	2,710	2,600	2,530
0 / 32	3,780	3,190	2,880	2,750	2,630	2,570
5 / 41	4,230	3,490	3,040	2,760	2,630	2,510
10 / 50	4,780	3,870	3,310	2,860	2,640	2,510
15 / 59	5,620	4,400	3,710	3,140	2,680	2,510
20 / 68	—	5,240	4,280	3,560	2,970	2,530
25 / 77	—	—	5,050	4,070	3,340	2,760
30 / 86	—	—	—	4,800	3,820	3,090
Climb Wght Temp Limits °C/°F	16/61	22/72	27/81	32/90	33/91	33/91
Field Length at Temp Limits (ft)	5,870	5,680	5,460	5,210	4,200	3,340

**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	8,645	8,000	7,500	7,000	6,500	6,000
-15 / 5	3,790	3,200	2,820	2,700	2,580	2,480
-10 / 14	3,850	3,250	2,870	2,740	2,620	2,520
-5 / 23	3,930	3,320	2,920	2,780	2,660	2,550
0 / 32	4,200	3,500	3,050	2,810	2,680	2,570
5 / 41	4,750	3,860	3,310	2,880	2,690	2,560
10 / 50	5,500	4,350	3,680	3,130	2,710	2,560
15 / 59	—	5,060	4,180	3,500	2,930	2,580
20 / 68	—	—	4,920	4,010	3,310	2,740
25 / 77	—	—	—	4,660	3,750	3,050
30 / 86	—	—	—	—	4,380	3,470
Climb Wght Temp Limits °C/°F	12/54	18/64	23/73	28/82	31/88	31/88
Field Length at Temp Limits (ft)	5,890	5,710	5,500	5,210	4,540	3,570

<b>Elevation = 9,000 Feet</b>						
Ambient Temp	Takeoff Weight (lb)					
°C / °F	8,645	8,000	7,500	7,000	6,500	6,000
-20 / -4	3,990	3,330	2,910	2,730	2,600	2,490
-15 / 5	4,050	3,390	2,970	2,780	2,650	2,540
-10 / 14	4,100	3,450	3,020	2,820	2,690	2,580
-5 / 23	4,210	3,540	3,090	2,860	2,730	2,610
0 / 32	4,740	3,870	3,330	2,900	2,740	2,610
5 / 41	5,460	4,340	3,680	3,140	2,760	2,610
10 / 50	—	4,990	4,150	3,480	2,930	2,630
15 / 59	—	—	4,780	3,930	3,260	2,720
20 / 68	—	—	—	4,570	3,700	3,030
25 / 77	—	—	—	5,460	4,250	3,410
Climb Wght Temp Limits °C/°F	8/46	14/57	19/66	25/77	29/84	29/84
Field Length at Temp Limits (ft)	6,050	5,710	5,550	5,460	4,960	3,840

## TAKEOFF PERFORMANCE

### TAKEOFF FIELD LENGTH – FLAPS UP

(Over 35 Foot Screen Height)

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

Elevation = Sea Level						
Ambient Temp	Takeoff Weight (lb)					
°C / °F	8,645	8,000	7,500	7,000	6,500	6,000
0 / 32	3,810	3,220	2,860	2,730	2,610	2,500
10 / 50	3,950	3,330	2,960	2,810	2,690	2,580
15 / 59	4,020	3,380	3,010	2,850	2,730	2,610
20 / 68	4,090	3,440	3,060	2,900	2,770	2,650
25 / 77	4,160	3,490	3,110	2,950	2,810	2,690
30 / 86	4,360	3,650	3,190	2,980	2,830	2,700
35 / 95	4,780	3,980	3,450	2,990	2,830	2,690
40 / 104	5,250	4,390	3,790	3,250	2,840	2,690
45 / 113	5,800	4,840	4,260	3,650	3,090	2,690
50 / 122	—	5,440	4,670	4,130	3,500	2,920
Climb Wght Temp Limits °C/°F	49/120	50/122	50/122	50/122	50/122	50/122
Field Length at Temp Limits (ft)	6,320	5,440	4,670	4,130	3,500	2,920

Elevation = 1,000 Feet						
Ambient Temp	Takeoff Weight (lb)					
°C / °F	8,645	8,000	7,500	7,000	6,500	6,000
0 / 32	3,940	3,320	2,960	2,810	2,690	2,580
5 / 41	4,020	3,380	3,010	2,860	2,730	2,610
10 / 50	4,090	3,440	3,060	2,900	2,770	2,650
15 / 59	4,160	3,500	3,110	2,950	2,810	2,690
20 / 68	4,240	3,560	3,160	3,000	2,850	2,730
25 / 77	4,410	3,700	3,220	3,030	2,880	2,760
30 / 86	4,830	4,020	3,480	3,040	2,880	2,750
35 / 95	5,260	4,400	3,790	3,270	2,890	2,740
40 / 104	5,760	4,820	4,230	3,600	3,050	2,750
45 / 113	6,410	5,400	4,630	4,090	3,440	2,880
Climb Wght Temp Limits °C/°F	45/113	47/117	47/117	47/117	47/117	47/117
Field Length at Temp Limits (ft)	6,410	5,670	4,810	4,250	3,630	3,020

## 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	Takeoff Weight (lb)					
°C / °F	8,645	8,000	7,500	7,000	6,500	6,000
0 / 32	4,090	3,440	3,060	2,910	2,770	2,660
5 / 41	4,160	3,500	3,120	2,960	2,810	2,700
10 / 50	4,240	3,560	3,170	3,010	2,860	2,740
15 / 59	4,310	3,620	3,220	3,050	2,900	2,780
20 / 68	4,450	3,730	3,270	3,100	2,940	2,810
25 / 77	4,880	4,060	3,520	3,100	2,940	2,800
30 / 86	5,310	4,440	3,830	3,300	2,950	2,800
35 / 95	5,790	4,870	4,240	3,610	3,070	2,800
40 / 104	6,380	5,380	4,620	4,040	3,400	2,860
45 / 113	—	6,020	5,110	4,460	3,850	3,200
Climb Wght Temp Limits °C/°F	42/108	45/113	45/113	45/113	45/113	45/113
Field Length at Temp Limits (ft)	6,640	6,020	5,110	4,460	3,850	3,200

<b>Elevation = 3,000 Feet</b>						
Ambient Temp	Takeoff Weight (lb)					
°C / °F	8,645	8,000	7,500	7,000	6,500	6,000
-5 / 23	4,160	3,490	3,120	2,960	2,810	2,700
0 / 32	4,240	3,560	3,170	3,010	2,860	2,740
5 / 41	4,310	3,620	3,230	3,060	2,910	2,790
10 / 50	4,390	3,680	3,280	3,110	2,950	2,820
15 / 59	4,480	3,760	3,340	3,170	3,000	2,870
20 / 68	4,910	4,090	3,550	3,170	2,990	2,850
25 / 77	5,350	4,480	3,870	3,340	3,000	2,850
30 / 86	5,850	4,920	4,260	3,630	3,110	2,850
35 / 95	6,410	5,430	4,650	4,040	3,410	2,890
40 / 104	—	6,000	5,110	4,450	3,810	3,170
Climb Wght Temp Limits °C/°F	38/100	43/109	43/109	43/109	43/109	43/109
Field Length at Temp Limits (ft)	6,790	6,380	5,460	4,680	4,090	3,400

**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	Takeoff Weight (lb)					
°C / °F	8,645	8,000	7,500	7,000	6,500	6,000
-5 / 23	4,310	3,620	3,230	3,060	2,910	2,790
0 / 32	4,390	3,690	3,290	3,110	2,950	2,830
5 / 41	4,480	3,750	3,350	3,170	3,010	2,870
10 / 50	4,580	3,830	3,400	3,220	3,050	2,920
15 / 59	4,920	4,120	3,570	3,240	3,060	2,910
20 / 68	5,380	4,520	3,900	3,360	3,060	2,900
25 / 77	5,890	4,980	4,270	3,670	3,130	2,900
30 / 86	6,470	5,500	4,690	4,060	3,430	2,920
35 / 95	—	6,040	5,170	4,480	3,820	3,180
40 / 104	—	—	5,730	4,850	4,240	3,550
Climb Wght Temp Limits °C/°F	33/91	39/102	40/104	40/104	40/104	40/104
Field Length at Temp Limits (ft)	6,850	6,530	5,730	4,850	4,240	3,550

<b>Elevation = 5,000 Feet</b>						
Ambient Temp	Takeoff Weight (lb)					
°C / °F	8,645	8,000	7,500	7,000	6,500	6,000
-10 / 14	4,390	3,680	3,290	3,120	2,960	2,830
-5 / 23	4,470	3,750	3,350	3,170	3,010	2,880
0 / 32	4,560	3,820	3,410	3,230	3,060	2,920
5 / 41	4,650	3,890	3,460	3,280	3,110	2,970
10 / 50	4,970	4,160	3,610	3,300	3,120	2,970
15 / 59	5,390	4,540	3,920	3,380	3,120	2,960
20 / 68	5,920	5,010	4,300	3,690	3,160	2,960
25 / 77	6,510	5,540	4,730	4,070	3,440	2,970
30 / 86	—	6,080	5,220	4,510	3,830	3,200
35 / 95	—	6,690	5,770	4,870	4,260	3,550
Climb Wght Temp Limits °C/°F	29/84	35/95	38/100	38/100	38/100	38/100
Field Length at Temp Limits (ft)	7,030	6,690	6,160	5,180	4,480	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

Elevation = 6,000 Feet						
Ambient Temp	Takeoff Weight (lb)					
°C / °F	8,645	8,000	7,500	7,000	6,500	6,000
-10 / 14	4,570	3,830	3,410	3,230	3,060	2,920
-5 / 23	4,660	3,890	3,470	3,290	3,110	2,970
0 / 32	4,750	3,980	3,530	3,340	3,170	3,020
5 / 41	5,010	4,210	3,650	3,380	3,190	3,030
10 / 50	5,410	4,560	3,940	3,400	3,190	3,020
15 / 59	5,870	4,990	4,280	3,680	3,210	3,020
20 / 68	6,480	5,520	4,730	4,040	3,440	3,030
25 / 77	7,150	6,060	5,210	4,500	3,790	3,180
30 / 86	—	6,670	5,760	4,860	4,240	3,510
35 / 95	—	—	6,410	5,370	4,610	3,930
Climb Wght Temp Limits °C/°F	26/79	32/90	36/97	36/97	36/97	36/97
Field Length at Temp Limits (ft)	7,280	6,920	6,540	5,500	4,690	4,030

Elevation = 7,000 Feet						
Ambient Temp	Takeoff Weight (lb)					
°C / °F	8,645	8,000	7,500	7,000	6,500	6,000
-15 / 5	4,740	3,960	3,460	3,270	3,100	2,950
-10 / 14	4,820	4,040	3,520	3,330	3,150	3,000
-5 / 23	4,900	4,110	3,590	3,390	3,210	3,050
0 / 32	5,010	4,210	3,650	3,450	3,260	3,100
5 / 41	5,450	4,610	3,980	3,460	3,260	3,080
10 / 50	5,900	5,020	4,310	3,700	3,270	3,090
15 / 59	6,420	5,490	4,710	4,030	3,430	3,100
20 / 68	7,120	6,040	5,210	4,460	3,760	3,190
25 / 77	—	6,640	5,760	4,860	4,190	3,480
30 / 86	—	—	6,370	5,360	4,600	3,880
Climb Wght Temp Limits °C/°F	22/72	28/82	33/91	33/91	33/91	33/91
Field Length at Temp Limits (ft)	8,010	7,030	6,770	5,710	4,840	4,170

**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	8,645	8,000	7,500	7,000	6,500	6,000	
-15 / 5	5,010	4,210	3,650	3,380	3,190	3,030	
-10 / 14	5,100	4,290	3,720	3,440	3,250	3,080	
-5 / 23	5,190	4,380	3,790	3,500	3,300	3,130	
0 / 32	5,470	4,640	4,000	3,540	3,330	3,150	
5 / 41	5,920	5,060	4,340	3,730	3,350	3,150	
10 / 50	6,440	5,500	4,730	4,050	3,440	3,160	
15 / 59	7,200	6,010	5,200	4,420	3,750	3,180	
20 / 68	—	6,630	5,770	4,870	4,160	3,460	
25 / 77	—	7,290	6,350	5,360	4,590	3,840	
30 / 86	—	—	—	5,940	5,020	4,300	
Climb Wght Temp Limits °C/°F	18/64	25/77	29/84	31/88	31/88	31/88	
Field Length at Temp Limits (ft)	8,510	7,290	6,870	6,080	5,130	4,380	

<b>Elevation = 9,000 Feet</b>							
Ambient Temp	Takeoff Weight (lb)						
°C / °F	8,645	8,000	7,500	7,000	6,500	6,000	
-20 / -4	5,220	4,400	3,810	3,420	3,230	3,060	
-15 / 5	5,310	4,480	3,880	3,480	3,290	3,110	
-10 / 14	5,390	4,570	3,950	3,550	3,350	3,170	
-5 / 23	5,510	4,690	4,050	3,620	3,410	3,220	
0 / 32	5,970	5,110	4,390	3,770	3,420	3,220	
5 / 41	6,480	5,540	4,780	4,090	3,480	3,220	
10 / 50	7,410	6,030	5,230	4,450	3,770	3,240	
15 / 59	9,460	6,600	5,760	4,870	4,110	3,450	
20 / 68	—	7,290	6,350	5,370	4,600	3,820	
25 / 77	—	—	6,980	5,930	4,990	4,270	
Climb Wght Temp Limits °C/°F	15/59	21/70	26/79	29/84	29/84	29/84	
Field Length at Temp Limits (ft)	9,460	7,430	7,130	6,500	5,470	4,600	



## CLIMB PERFORMANCE

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

<b>Time, Fuel, and Distance To Climb *</b>						
Pressure Altitude (ft)		----- Takeoff Weight (lb) -----				
		8,645	8,000	7,500	7,000	6,500
15,000	Min	6	5	5	4	4
	Lb	119	108	100	92	84
	NM	18	17	15	14	13
21,000	Min	9	8	7	7	6
	Lb	166	151	139	128	117
	NM	29	26	24	22	20
25,000	Min	11	10	9	8	8
	Lb	199	180	166	152	139
	NM	38	35	32	29	27
27,000	Min	12	11	10	9	8
	Lb	216	195	179	165	151
	NM	44	39	36	33	30
29,000	Min	13	12	11	10	9
	Lb	232	209	193	177	161
	NM	49	44	40	37	34
31,000	Min	15	13	12	11	10
	Lb	248	223	205	188	172
	NM	55	49	45	41	37
33,000	Min	16	14	13	12	11
	Lb	265	238	218	199	182
	NM	61	54	50	45	41
35,000	Min	18	16	15	13	12
	Lb	283	253	231	211	193
	NM	68	60	55	50	45
37,000	Min	20	18	16	15	13
	Lb	302	269	246	224	204
	NM	76	67	61	55	50
39,000	Min	22	20	18	16	15
	Lb	326	288	262	238	216
	NM	87	76	69	62	56
41,000	Min	27	23	20	18	16
	Lb	359	312	282	255	230
	NM	105	89	79	70	63

\* 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) -----				
		8,645	8,000	7,500	7,000	6,500
5,000	KTAS	269	269	269	269	269
	Lb/Hr	1,033	1,026	1,020	1,016	1,011
10,000	KTAS	290	290	290	290	290
	Lb/Hr	992	984	979	974	969
15,000	KTAS	312	312	312	312	312
	Lb/Hr	969	961	955	949	944
21,000	KTAS	334	335	337	338	339
	Lb/Hr	917	917	918	919	919
23,000	KTAS	338	339	341	342	343
	Lb/Hr	883	883	883	884	884
25,000	KTAS	340	342	343	345	346
	Lb/Hr	843	843	843	844	844
27,000	KTAS	338	340	342	344	346
	Lb/Hr	785	786	787	788	789
29,000	KTAS	337	340	342	344	345
	Lb/Hr	736	737	737	737	737
31,000	KTAS	335	338	341	343	345
	Lb/Hr	687	688	688	690	691
33,000	KTAS	334	338	340	343	345
	Lb/Hr	648	647	647	647	646
35,000	KTAS	332	337	340	343	346
	Lb/Hr	609	609	609	609	609
37,000	KTAS	326	333	338	342	346
	Lb/Hr	565	567	569	570	572
39,000	KTAS	314	323	330	336	341
	Lb/Hr	517	516	518	520	522
41,000	KTAS		306	317	326	333
	Lb/Hr		465	468	470	473

## CRUISE PERFORMANCE

### LONG RANGE CRUISE

ISA, Anti-Ice Off

<b>Cruise Speed &amp; Fuel Flow</b>						
Pressure Altitude (ft)		----- Cruise Weight (lb) -----				
		8,645	8,000	7,500	7,000	6,500
5,000	KTAS	218	210	205	200	195
	Lb/Hr	788	741	712	683	654
10,000	KTAS	238	230	224	219	211
	Lb/Hr	761	718	687	662	626
15,000	KTAS	253	245	238	232	224
	Lb/Hr	716	678	646	618	586
21,000	KTAS	275	266	259	252	246
	Lb/Hr	671	635	606	579	553
23,000	KTAS	281	275	267	258	250
	Lb/Hr	654	626	595	563	534
25,000	KTAS	285	281	276	267	257
	Lb/Hr	631	607	584	553	521
27,000	KTAS	288	284	280	273	265
	Lb/Hr	609	583	563	537	510
29,000	KTAS	291	287	284	280	273
	Lb/Hr	586	561	543	523	499
31,000	KTAS	294	290	287	283	279
	Lb/Hr	567	541	523	504	483
33,000	KTAS	300	293	289	286	282
	Lb/Hr	555	523	503	484	465
35,000	KTAS	310	300	294	289	285
	Lb/Hr	550	514	488	467	447
37,000	KTAS	317	314	307	295	289
	Lb/Hr	542	519	493	460	436
39,000	KTAS		320	319	317	301
	Lb/Hr		508	493	477	438
41,000	KTAS				324	323
	Lb/Hr				466	453

## DESCENT PERFORMANCE

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

		Time, Fuel, and Distance To Descend *					
		High Speed – 3,000 FPM			Normal – 2,000 FPM		
Pressure Altitude (ft)		----- End of Cruise Weight (lb) -----			----- End of Cruise Weight (lb) -----		
		8,000	7,000	6,000	8,000	7,000	6,000
15,000	Min	5	5	5	8	8	8
	Lb	21	26	32	58	63	68
	NM	23	22	22	34	34	34
25,000	Min	8	8	8	13	13	13
	Lb	37	45	55	97	105	113
	NM	40	40	40	61	61	61
27,000	Min	9	9	9	14	14	14
	Lb	41	49	59	105	113	121
	NM	44	44	44	66	66	66
29,000	Min	10	10	10	15	15	15
	Lb	45	54	64	114	122	131
	NM	48	48	48	73	73	73
31,000	Min	10	10	10	16	16	16
	Lb	49	58	69	122	130	139
	NM	52	52	52	78	78	78
33,000	Min	11	11	11	17	17	17
	Lb	52	62	73	128	137	146
	NM	56	56	56	84	84	84
35,000	Min	12	12	12	18	18	18
	Lb	55	65	76	134	143	153
	NM	61	60	60	90	90	90
37,000	Min	13	13	12	19	19	19
	Lb	60	69	80	139	149	158
	NM	66	65	64	96	96	96
39,000	Min	14	14	13	20	20	20
	Lb	64	73	83	144	153	163
	NM	72	71	70	102	102	102
41,000	Min	15	15	14	21	21	21
	Lb	68	77	88	148	158	167
	NM	78	77	75	108	108	108

\* 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)	291 lb
Night (45 minutes)	444 lb

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

100 Nautical Mile Alternate	729 lb
200 Nautical Mile Alternate	915 lb
300 Nautical Mile Alternate	1,056 lb

#### NBAA IFR Reserves \*

100 Nautical Mile Alternate	622 lb
200 Nautical Mile Alternate	805 lb
300 Nautical Mile Alternate	944 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
8,000	150	610	581	554	530	507	486	466
7,500	140	573	543	517	492	472	451	433
7,000	130	538	508	482	457	438	418	401
6,500	130	521	492	466	440	421	401	385
6,000	130	506	477	451	425	406	386	369

## LANDING PERFORMANCE

### LANDING DISTANCE – ACTUAL

(Distance from 50 Feet Above the Runway)

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

Elevation = Sea Level						
Ambient Temp	Landing Weight (lb)					
°C / °F	* 8,645	8,000	7,500	7,000	6,500	6,000
0 / 32	2,440	2,290	2,170	2,060	1,960	1,850
10 / 50	2,510	2,350	2,220	2,110	2,000	1,890
15 / 59	2,550	2,380	2,250	2,130	2,020	1,910
20 / 68	2,580	2,410	2,280	2,160	2,050	1,940
25 / 77	2,620	2,440	2,310	2,190	2,070	1,960
30 / 86	2,660	2,470	2,340	2,210	2,090	1,980
35 / 95	2,690	2,510	2,370	2,240	2,120	2,000
40 / 104	2,730	2,540	2,400	2,270	2,140	2,020
45 / 113	—	2,580	2,430	2,300	2,170	2,050
50 / 122	—	—	2,460	2,330	2,190	2,070
Lndg Wght Temp Limits °C/°F	44/111	49/120	50/122	50/122	50/122	50/122
V <sub>REF</sub> (KIAS)	98	94	91	88	85	82

Elevation = 1,000 Feet						
Ambient Temp	Landing Weight (lb)					
°C / °F	* 8,645	8,000	7,500	7,000	6,500	6,000
0 / 32	2,510	2,350	2,220	2,110	2,000	1,900
5 / 41	2,550	2,380	2,250	2,130	2,020	1,920
10 / 50	2,590	2,410	2,280	2,160	2,050	1,940
15 / 59	2,620	2,440	2,310	2,190	2,070	1,960
20 / 68	2,660	2,480	2,340	2,210	2,100	1,980
25 / 77	2,700	2,510	2,380	2,240	2,120	2,000
30 / 86	2,740	2,550	2,410	2,270	2,150	2,030
35 / 95	2,780	2,580	2,440	2,300	2,170	2,050
40 / 104	2,810	2,610	2,470	2,330	2,190	2,070
45 / 113	—	2,650	2,500	2,360	2,220	2,100
Lndg Wght Temp Limits °C/°F	41/106	46/115	47/117	47/117	47/117	47/117
V <sub>REF</sub> (KIAS)	98	94	91	88	85	82

\* For use in an emergency. Maximum designed landing weight = 8,000 pounds (3,629 kg).

## LANDING PERFORMANCE

### LANDING DISTANCE – ACTUAL

(Distance from 50 Feet Above the Runway)

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

Elevation = 2,000 Feet						
Ambient Temp	Landing Weight (lb)					
°C / °F	* 8,645	8,000	7,500	7,000	6,500	6,000
0 / 32	2,590	2,410	2,290	2,160	2,050	1,940
5 / 41	2,620	2,450	2,320	2,190	2,070	1,960
10 / 50	2,660	2,480	2,350	2,220	2,100	1,980
15 / 59	2,700	2,510	2,380	2,240	2,120	2,000
20 / 68	2,740	2,550	2,410	2,270	2,150	2,030
25 / 77	2,780	2,590	2,440	2,300	2,170	2,050
30 / 86	2,820	2,620	2,470	2,330	2,200	2,080
35 / 95	2,860	2,660	2,510	2,370	2,220	2,100
40 / 104	—	2,690	2,540	2,400	2,250	2,120
45 / 113	—	—	2,570	2,420	2,280	2,150
Lndg Wght Temp Limits °C/°F	36/97	42/108	45/113	45/113	45/113	45/113
V <sub>REF</sub> (KIAS)	98	94	91	88	85	82

Elevation = 3,000 Feet						
Ambient Temp	Landing Weight (lb)					
°C / °F	* 8,645	8,000	7,500	7,000	6,500	6,000
-5 / 23	2,630	2,450	2,320	2,190	2,080	1,970
0 / 32	2,670	2,480	2,350	2,220	2,100	1,990
5 / 41	2,710	2,520	2,380	2,250	2,130	2,010
10 / 50	2,740	2,550	2,410	2,280	2,150	2,030
15 / 59	2,780	2,590	2,440	2,310	2,170	2,050
20 / 68	2,820	2,620	2,480	2,340	2,200	2,080
25 / 77	2,870	2,660	2,510	2,370	2,220	2,100
30 / 86	2,910	2,700	2,550	2,400	2,250	2,130
35 / 95	—	2,740	2,580	2,430	2,280	2,150
40 / 104	—	—	2,610	2,460	2,310	2,180
Lndg Wght Temp Limits °C/°F	32/90	38/100	43/109	43/109	43/109	43/109
V <sub>REF</sub> (KIAS)	98	94	91	88	85	82

\* For use in an emergency. Maximum designed landing weight = 8,000 pounds (3,629 kg).

**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	* 8,645	8,000	7,500	7,000	6,500	6,000
-5 / 23	2,710	2,520	2,390	2,250	2,130	2,010
0 / 32	2,750	2,560	2,420	2,280	2,150	2,030
5 / 41	2,790	2,590	2,450	2,310	2,180	2,060
10 / 50	2,830	2,630	2,480	2,340	2,200	2,080
15 / 59	2,870	2,660	2,520	2,370	2,230	2,110
20 / 68	2,920	2,700	2,550	2,400	2,260	2,130
25 / 77	2,960	2,740	2,590	2,430	2,280	2,160
30 / 86	—	2,780	2,620	2,470	2,310	2,180
35 / 95	—	—	2,660	2,500	2,340	2,200
40 / 104	—	—	—	2,530	2,370	2,230
Lndg Wght Temp Limits °C/°F	28/82	34/93	39/102	40/104	40/104	40/104
V <sub>REF</sub> (KIAS)	98	94	91	88	85	82

<b>Elevation = 5,000 Feet</b>						
Ambient Temp	Landing Weight (lb)					
°C / °F	* 8,645	8,000	7,500	7,000	6,500	6,000
-10 / 14	2,750	2,560	2,420	2,280	2,160	2,040
-5 / 23	2,800	2,600	2,450	2,320	2,180	2,060
0 / 32	2,830	2,630	2,490	2,350	2,210	2,090
5 / 41	2,880	2,670	2,520	2,380	2,230	2,110
10 / 50	2,920	2,710	2,560	2,410	2,260	2,130
15 / 59	2,970	2,750	2,590	2,440	2,290	2,160
20 / 68	3,010	2,790	2,620	2,470	2,320	2,180
25 / 77	—	2,830	2,660	2,500	2,350	2,210
30 / 86	—	2,870	2,700	2,540	2,380	2,230
35 / 95	—	—	2,740	2,570	2,410	2,260
Lndg Wght Temp Limits °C/°F	24/75	30/86	35/95	38/100	38/100	38/100
V <sub>REF</sub> (KIAS)	98	94	91	88	85	82

\* For use in an emergency. Maximum designed landing weight = 8,000 pounds (3,629 kg).



## LANDING PERFORMANCE

### LANDING DISTANCE – ACTUAL

(Distance from 50 Feet Above the Runway)

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

Elevation = 6,000 Feet						
Ambient Temp	Landing Weight (lb)					
°C / °F	* 8,645	8,000	7,500	7,000	6,500	6,000
-10 / 14	2,850	2,650	2,500	2,360	2,220	2,100
-5 / 23	2,890	2,680	2,530	2,390	2,240	2,120
0 / 32	2,940	2,720	2,570	2,420	2,270	2,150
5 / 41	2,980	2,760	2,600	2,450	2,300	2,170
10 / 50	3,020	2,800	2,640	2,480	2,330	2,190
15 / 59	3,070	2,840	2,670	2,520	2,360	2,220
20 / 68	3,120	2,880	2,710	2,550	2,390	2,240
25 / 77	—	2,920	2,750	2,590	2,420	2,270
30 / 86	—	—	2,790	2,620	2,450	2,300
35 / 95	—	—	—	2,650	2,480	2,320
Lndg Wght Temp Limits °C/°F	20/68	26/79	31/88	36/97	36/97	36/97
V <sub>REF</sub> (KIAS)	98	94	91	88	85	82

Elevation = 7,000 Feet						
Ambient Temp	Landing Weight (lb)					
°C / °F	* 8,645	8,000	7,500	7,000	6,500	6,000
-15 / 5	2,910	2,700	2,550	2,400	2,250	2,130
-10 / 14	2,950	2,740	2,580	2,430	2,280	2,160
-5 / 23	3,000	2,780	2,620	2,470	2,310	2,180
0 / 32	3,040	2,820	2,650	2,500	2,340	2,210
5 / 41	3,090	2,860	2,690	2,530	2,370	2,230
10 / 50	3,140	2,900	2,730	2,570	2,400	2,260
15 / 59	3,190	2,940	2,770	2,600	2,430	2,280
20 / 68	—	2,980	2,800	2,630	2,460	2,310
25 / 77	—	—	2,840	2,670	2,500	2,340
30 / 86	—	—	—	2,700	2,530	2,360
Lndg Wght Temp Limits °C/°F	17/63	22/72	28/82	33/91	33/91	33/91
V <sub>REF</sub> (KIAS)	98	94	91	88	85	82

\* For use in an emergency. Maximum designed landing weight = 8,000 pounds (3,629 kg).

## LANDING PERFORMANCE

### LANDING DISTANCE – ACTUAL

(Distance from 50 Feet Above the Runway)

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

Elevation = 8,000 Feet						
Ambient Temp °C / °F	Landing Weight (lb)					
	* 8,645	8,000	7,500	7,000	6,500	6,000
-15 / 5	3,010	2,790	2,630	2,480	2,330	2,190
-10 / 14	3,060	2,830	2,670	2,510	2,360	2,220
-5 / 23	3,110	2,870	2,710	2,550	2,390	2,250
0 / 32	3,160	2,920	2,740	2,580	2,420	2,270
5 / 41	3,210	2,960	2,780	2,610	2,450	2,300
10 / 50	3,250	3,000	2,820	2,650	2,480	2,320
15 / 59	—	3,040	2,860	2,680	2,510	2,350
20 / 68	—	—	2,900	2,720	2,540	2,380
25 / 77	—	—	—	2,760	2,580	2,400
30 / 86	—	—	—	—	2,610	2,430
Lndg Wght Temp Limits °C/°F	13/55	19/66	24/75	29/84	31/88	31/88
V <sub>REF</sub> (KIAS)	98	94	91	88	85	82

\* For use in an emergency. Maximum designed landing weight = 8,000 pounds (3,629 kg).

## STALL SPEEDS

Zero Angle of Bank, Landing Gear Up or Down, Anti-Ice Off, KCAS

Weight (lb)	Stall Speeds		
	Flap Position		
	Land	15°	Up
8,645	76	81	91
8,000	73	78	87
7,500	71	76	85
7,000	68	73	82
6,500	66	71	79
6,000	63	68	76

## 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 60 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 - 15,000
100 - 199	14,000 - 28,000
200 - 299	27,000 - 35,000
300 - 499	33,000 - 37,000
500 - 999	35,000 - 39,000
1000 +	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	1.55	1.37	1.22	1.10	1.00	0.92	0.85	0.79	0.74
290	1.53	1.35	1.21	1.09	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
310	1.48	1.32	1.19	1.09	1.00	0.93	0.86	0.81	0.76
320	1.45	1.31	1.19	1.08	1.00	0.93	0.86	0.81	0.76
330	1.43	1.29	1.18	1.08	1.00	0.93	0.87	0.81	0.77
340	1.42	1.28	1.17	1.08	1.00	0.93	0.87	0.82	0.77

\* 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)									
	15,000		25,000		27,000		29,000		31,000	
	Time (min)	Fuel (lb)	Time (min)	Fuel (lb)	Time (min)	Fuel (lb)	Time (min)	Fuel (lb)	Time (min)	Fuel (lb)
100	0:22	375	0:21	336	0:22	329				
150	0:31	528	0:30	460	0:31	446	0:32	435	0:31	426
200	0:41	682	0:39	584	0:40	562	0:40	544	0:40	528
250	0:51	836	0:48	708	0:49	678	0:49	654	0:49	630
300	1:00	990	0:57	832	0:57	795	0:58	763	0:58	733
350	1:10	1,144	1:06	957	1:06	912	1:07	873	1:06	836
400	1:19	1,298	1:15	1,081	1:15	1,029	1:16	982	1:15	939
450	1:29	1,454	1:23	1,206	1:24	1,146	1:25	1,091	1:24	1,041
500	1:39	1,610	1:32	1,331	1:33	1,264	1:33	1,201	1:33	1,144
600	1:59	1,924	1:50	1,582	1:51	1,498	1:51	1,421	1:51	1,351
700			2:08	1,834	2:08	1,733	2:09	1,642	2:09	1,557
800	<div style="border: 1px solid black; padding: 5px;"> <p>Assumptions:</p> <ul style="list-style-type: none"> <li>• Cruise climb</li> <li>• High-speed cruise</li> <li>• High-speed descent</li> <li>• ISA, zero winds enroute</li> <li>• Flight time includes climb, cruise and descent</li> <li>• Fuel burn includes 60 pounds for taxi and takeoff</li> <li>• Three passengers @ 200 pounds each, single pilot</li> <li>• NBAA IFR Reserves - 100 nm (622 lb) Reserves are not included in the fuel burn figures</li> </ul> </div>									
900										
1,000										
1,100										
1,150										

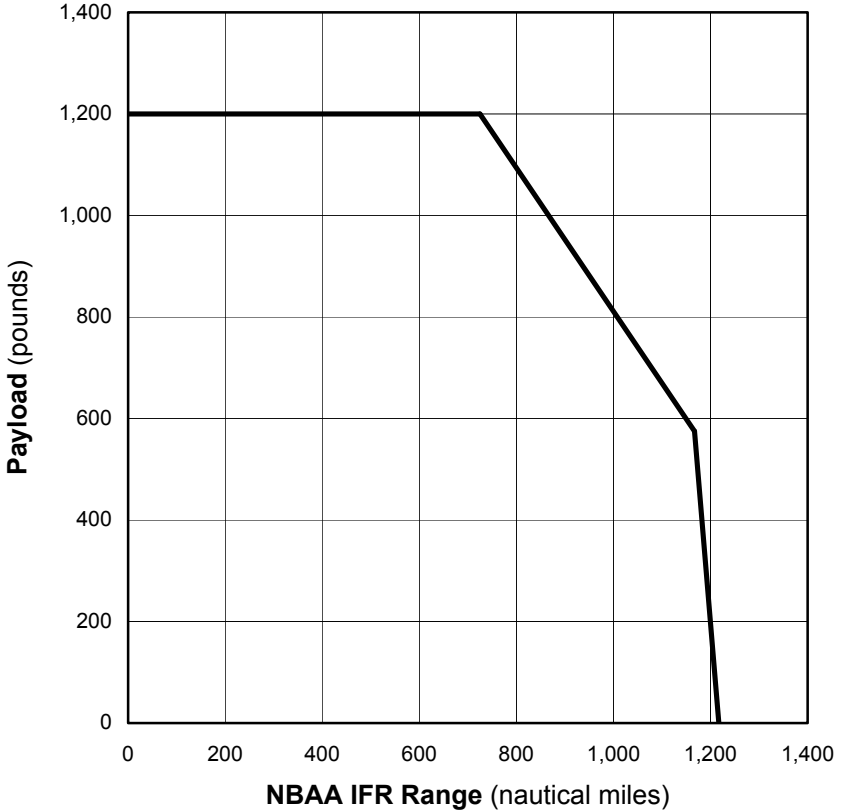
**FOR SELECTED DISTANCES**

----- 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
0:32	418	0:32	412	0:33	409					150
0:40	514	0:41	503	0:42	494	0:42	482	0:43	477	200
0:49	611	0:50	594	0:51	579	0:51	562	0:52	551	250
0:58	707	0:59	685	0:59	665	1:00	641	1:01	625	300
1:07	804	1:08	776	1:08	751	1:09	721	1:11	699	350
1:16	901	1:17	867	1:17	836	1:18	801	1:20	774	400
1:25	998	1:26	959	1:26	923	1:28	881	1:29	849	450
1:33	1,096	1:35	1,051	1:35	1,009	1:37	962	1:39	925	500
1:51	1,292	1:52	1,235	1:53	1,182	1:55	1,124	1:58	1,076	600
2:09	1,487	2:10	1,420	2:11	1,355	2:14	1,286	2:17	1,229	700
2:27	1,684	2:28	1,605	2:29	1,530	2:32	1,450	2:37	1,383	800
2:45	1,880	2:46	1,791	2:47	1,705	2:50	1,614	2:56	1,539	900
				3:06	1,881	3:09	1,779	3:16	1,696	1,000
								3:36	1,854	1,100
								3:46	1,932	1,150

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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





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