

4. ICAO STANDARD ATMOSPHERE

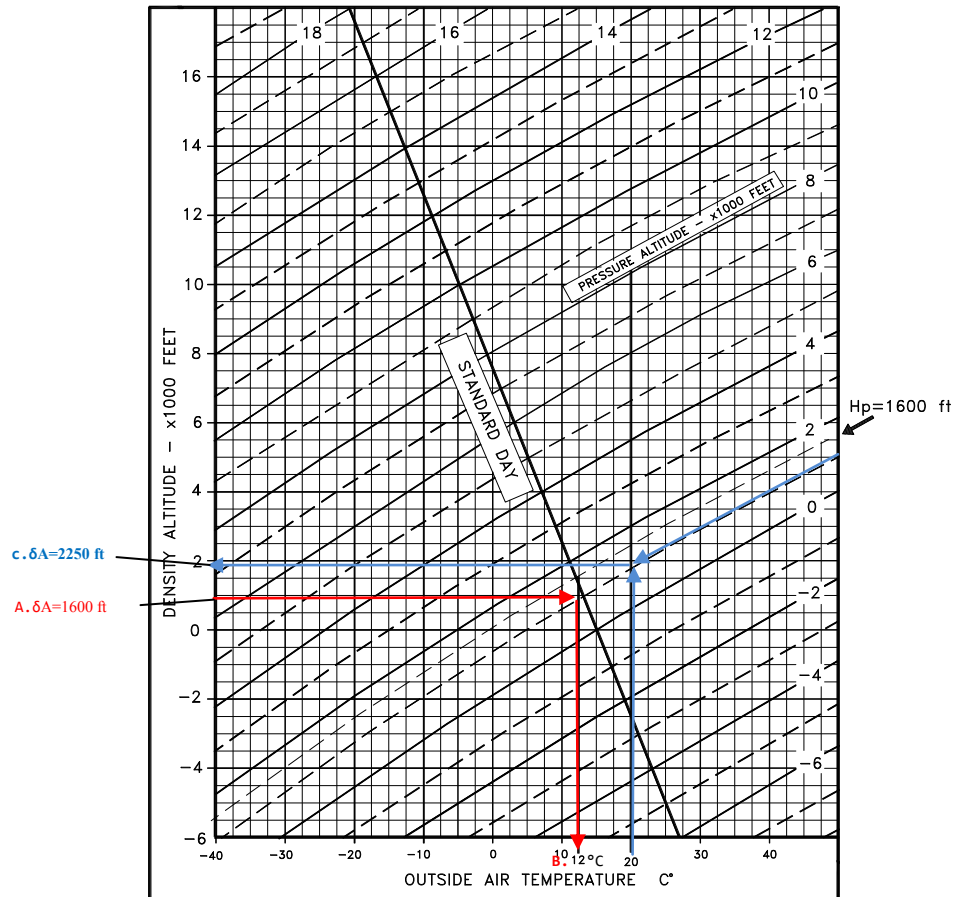


Figure 2 – ICAO chart

Examples:

Given

- a. Temperature = 20°C
- b. Pressure altitude = 1600'

Find

- c. Corresponding Density Altitude = 2250'

Given

- A. Pressure altitude = 1600'
- ISA condition

Find

- B. ISA Air Temperature = 12°C

5. STALL SPEED

Weight: 1230 kg (2712 lb)

Throttle Levers: IDLE

Landing Gear: Down

CG: Most Forward (16.5%)

No ground effect

WEIGHT [kg]	BANK ANGLE [deg]	STALL SPEED					
		FLAPS 0°		FLAPS T/O		FLAPS FULL	
		KIAS	KCAS	KIAS	KCAS	KIAS	KCAS
1230 (FWD C.G.)	0	66	65	59	57	54	55
	15	67	66	58	58	55	56
	30	71	70	61	61	59	59
	45	79	78	68	68	65	65
	60	95	93	83	81	79	78

NOTE

Altitude loss during conventional stall recovery, as demonstrated during flight tests is approximately 250 ft with banking below 30°.

6. CROSSWIND

Maximum demonstrated crosswind is 17 Kts

⇒ Example:

Given

Wind direction (with respect to aircraft longitudinal axis) = 30°

Wind speed = 20 Kts

Find

Headwind = 17.5 Kts

Crosswind = 10 Kts

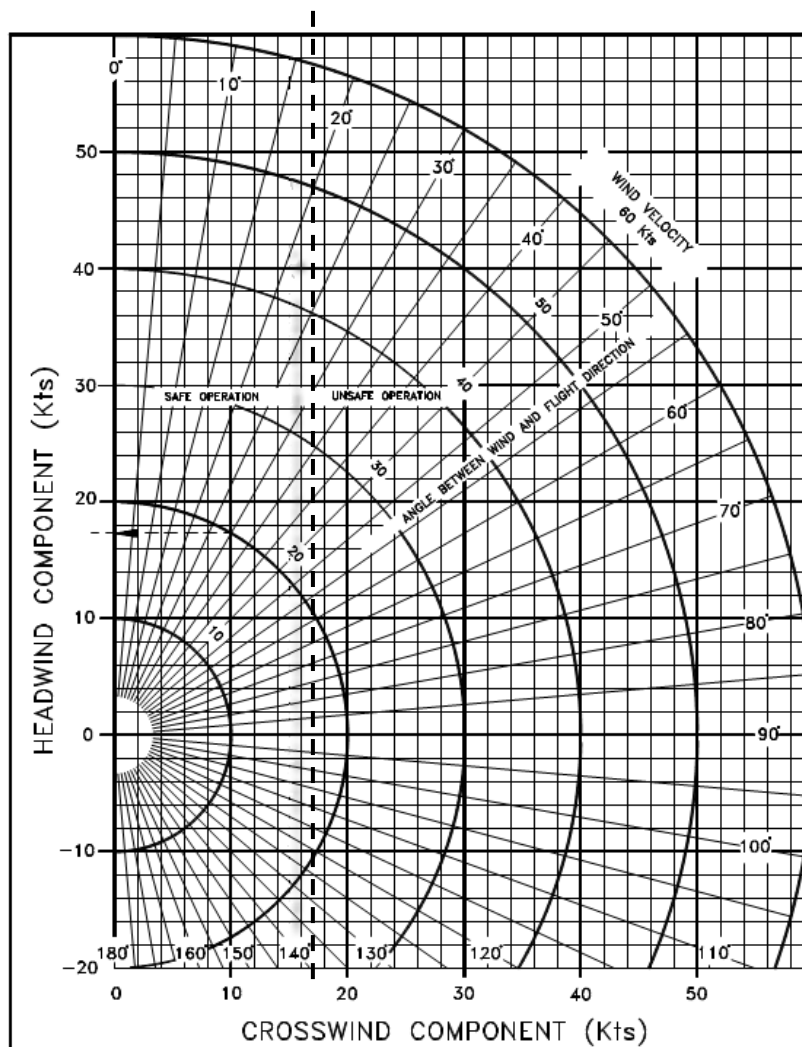


Figure 3 – Crosswind diagram

7. TAKEOFF PERFORMANCES

Weight = 1230 kg (2712 lb)						
Flaps: T/O Speed at Lift-Off = 65 KIAS Speed Over 50ft Obstacle = 70 KIAS Throttle Levers: Full Forward Runway: Grass Corrections Headwind: - 2.5m for each kt (8 ft/kt) Tailwind: + 10m for each kt (33ft/kt) Paved Runway: - 6% to Ground Roll Runway slope: + 5% to Ground Roll for each +1%						
Pressure Altitude [ft]		Distance [m]				
		Temperature [°C]				ISA
		-25	0	25	50	
S.L.	Ground Roll	207	263	328	401	301
	At 50 ft AGL	271	345	429	525	394
1000	Ground Roll	231	294	366	447	330
	At 50 ft AGL	303	385	479	586	432
2000	Ground Roll	258	328	409	500	362
	At 50 ft AGL	338	430	535	654	474
3000	Ground Roll	289	367	457	559	398
	At 50 ft AGL	378	480	598	731	521
4000	Ground Roll	323	411	511	625	438
	At 50 ft AGL	423	537	669	818	573
5000	Ground Roll	362	460	572	700	481
	At 50 ft AGL	473	602	749	916	630
6000	Ground Roll	405	515	642	785	530
	At 50 ft AGL	531	675	840	1027	694
7000	Ground Roll	455	578	720	880	584
	At 50 ft AGL	595	757	942	1152	765
8000	Ground Roll	511	650	809	989	645
	At 50 ft AGL	669	850	1059	1295	844
9000	Ground Roll	575	730	909	1112	712
	At 50 ft AGL	752	956	1190	1456	932
10000	Ground Roll	647	822	1023	1252	786
	At 50 ft AGL	847	1076	1340	1638	1029

Weight = 1080 kg (2381 lb)
Flaps: T/O
Speed at Lift-Off = 65 KIAS
Speed Over 50ft Obstacle = 70 KIAS
Throttle Levers: Full Forward
Runway: Grass
Corrections
Headwind: - 2.5m for each kt (8 ft/kt)
Tailwind: + 10m for each kt (33ft/kt)
Paved Runway: - 6% to Ground Roll
Runway slope: + 5% to Ground Roll for each +1%

Pressure Altitude [ft]		Distance [m]				
		Temperature [°C]				ISA
		-25	0	25	50	
S.L.	Ground Roll	148	188	234	286	215
	At 50 ft AGL	193	246	306	374	281
1000	Ground Roll	165	210	261	319	235
	At 50 ft AGL	216	274	341	418	308
2000	Ground Roll	184	234	291	356	258
	At 50 ft AGL	241	306	381	466	338
3000	Ground Roll	206	262	326	398	284
	At 50 ft AGL	269	342	426	521	372
4000	Ground Roll	230	293	364	446	312
	At 50 ft AGL	301	383	477	583	409
5000	Ground Roll	258	328	408	499	343
	At 50 ft AGL	338	429	534	653	449
6000	Ground Roll	289	368	457	559	378
	At 50 ft AGL	378	481	599	732	495
7000	Ground Roll	324	412	513	628	417
	At 50 ft AGL	425	540	672	822	545
8000	Ground Roll	364	463	577	705	460
	At 50 ft AGL	477	606	755	923	602
9000	Ground Roll	410	521	648	793	508
	At 50 ft AGL	536	682	849	1038	664
10000	Ground Roll	461	586	730	893	561
	At 50 ft AGL	604	767	955	1168	734

Section 5 - Performances

TAKEOFF PERFORMANCES

Weight = 930 kg (2051 lb)**Flaps:** *T/O***Speed at Lift-Off =** *65 KIAS***Speed Over 50ft Obstacle =** *70 KIAS***Throttle Levers:** *Full Forward***Runway:** *Grass***Corrections****Headwind:** - 2.5m for each kt (*8 ft/kt*)**Tailwind:** + 10m for each kt (*33ft/kt*)**Paved Runway:** - 6% to Ground Roll**Runway slope:** + 5% to Ground Roll for each +1%

Pressure Altitude [ft]		Distance [m]				
		Temperature [°C]				ISA
		-25	0	25	50	
S.L.	Ground Roll	100	127	158	194	146
	At 50 ft AGL	131	167	207	254	190
1000	Ground Roll	112	142	177	216	160
	At 50 ft AGL	146	186	231	283	209
2000	Ground Roll	125	159	197	242	175
	At 50 ft AGL	163	208	258	316	229
3000	Ground Roll	140	177	221	270	192
	At 50 ft AGL	183	232	289	353	252
4000	Ground Roll	156	198	247	302	212
	At 50 ft AGL	204	260	323	395	277
5000	Ground Roll	175	222	277	338	233
	At 50 ft AGL	229	291	362	443	305
6000	Ground Roll	196	249	310	379	256
	At 50 ft AGL	257	326	406	496	335
7000	Ground Roll	220	280	348	426	282
	At 50 ft AGL	288	366	455	557	370
8000	Ground Roll	247	314	391	478	312
	At 50 ft AGL	323	411	512	626	408
9000	Ground Roll	278	353	440	538	344
	At 50 ft AGL	364	462	575	704	450
10000	Ground Roll	313	397	495	605	380
	At 50 ft AGL	409	520	648	792	498

Section 5 - Performances**TAKEOFF PERFORMANCES**

8. TAKE-OFF RATE OF CLIMB AT V_Y

Power Setting: Maximum Continuous Power Flaps: Take-Off Landing Gear: Up							
Weight [kg]	Pressure Altitude [ft]	Climb Speed V_Y [KIAS]	Rate of Climb [ft/min]				
			Temperature [°C]				ISA
			-25	0	25	50	
1230	S.L.	86	1276	1088	920	768	985
	2000	83	1133	948	783	634	873
	4000	79	990	809	646	500	761
	6000	76	848	670	510	366	649
	8000	73	707	531	374	233	537
	10000	70	565	393	239	100	425
	12000	67	425	256	104	-32	313
	14000	64	285	118	-30	-164	201
1080	S.L.	85	1507	1302	1119	954	1190
	2000	82	1351	1150	970	808	1068
	4000	79	1196	998	822	662	946
	6000	76	1041	847	674	517	825
	8000	73	887	696	526	372	703
	10000	69	734	546	379	228	581
	12000	66	581	397	232	84	459
	14000	63	428	248	86	-59	338
930	S.L.	85	1803	1575	1372	1189	1451
	2000	82	1630	1406	1206	1026	1315
	4000	79	1457	1238	1041	864	1180
	6000	75	1286	1070	877	703	1045
	8000	72	1114	902	713	542	909
	10000	69	944	735	549	382	774
	12000	65	774	569	387	222	639
	14000	62	604	404	224	63	503

9. TAKE-OFF RATE OF CLIMB AT V_x

Power Setting: Maximum Continuous Power Flaps: Take-Off Landing Gear: Up							
Weight [kg]	Pressure Altitude [ft]	Climb Speed V_x [KIAS]	Rate of Climb at V_x [ft/min]				
			Temperature [°C]				ISA
			-25	0	25	50	
1230	S.L.	78	1214	1037	880	738	941
	1000	76	1147	972	816	675	888
	2000	75	1080	906	751	612	836
	3000	74	1013	841	687	549	783
	4000	73	946	776	623	486	731
	5000	72	879	710	560	424	678
	6000	71	813	645	496	361	626
	7000	70	746	580	432	299	574
1080	S.L.	78	1283	1102	940	794	1002
	1000	76	1214	1034	874	729	949
	2000	75	1145	967	808	664	895
	3000	74	1076	900	742	600	841
	4000	73	1008	833	676	535	787
	5000	72	939	766	611	471	733
	6000	71	871	699	545	407	679
	7000	70	803	632	480	342	625
930	S.L.	78	1435	1243	1072	918	1138
	1000	76	1362	1172	1002	849	1081
	2000	75	1289	1101	932	780	1024
	3000	74	1216	1030	863	712	967
	4000	73	1144	958	793	644	910
	5000	72	1071	888	724	576	853
	6000	71	999	817	654	508	796
	7000	69	927	746	585	440	739

10. ENROUTE RATE OF CLIMB AT V_y

Power Setting: Maximum Continuous Power Flaps: Up Landing Gear: Up							
Weight [kg]	Pressure Altitude [ft]	Climb Speed V_y [KIAS]	Rate of Climb [ft/min]				
			Temperature [°C]				ISA
			-25	0	25	50	
1230	S.L.	84	1317	1135	973	827	1036
	2000	83	1179	1000	841	697	928
	4000	81	1041	865	709	568	819
	6000	80	904	731	577	439	711
	8000	78	767	598	446	310	603
	10000	77	631	464	316	182	495
	12000	75	495	332	186	54	387
	14000	73	360	199	56	-73	279
1080	S.L.	83	1560	1360	1182	1022	1251
	2000	82	1408	1212	1037	879	1132
	4000	80	1257	1064	892	737	1014
	6000	78	1106	917	748	595	895
	8000	76	956	770	604	454	776
	10000	74	807	624	461	314	658
	12000	72	657	478	318	173	539
	14000	70	509	333	175	34	420
930	S.L.	82	1873	1649	1449	1269	1527
	2000	81	1703	1483	1286	1109	1393
	4000	79	1533	1317	1124	950	1260
	6000	77	1364	1151	962	791	1127
	8000	75	1196	987	800	632	994
	10000	73	1028	823	639	474	861
	12000	71	860	659	479	317	727
	14000	69	693	496	319	160	594

11. ENROUTE RATE OF CLIMB AT V_x

Power Setting: Maximum Continuous Power Flaps: Up Landing Gear: Up							
Weight [kg]	Pressure Altitude [ft]	Climb Speed V_x [KIAS]	Rate of Climb at V_x [ft/min]				
			Temperature [°C]				ISA
			-25	0	25	50	
1230	S.L.	72	1241	1073	924	789	982
	1000	72	1177	1011	863	729	932
	2000	72	1114	949	802	669	882
	3000	72	1050	887	741	609	832
	4000	72	986	825	680	550	782
	5000	72	923	763	619	490	732
	6000	71	860	701	559	431	682
	7000	71	797	639	498	371	632
1080	S.L.	72	1480	1295	1130	981	1194
	1000	72	1410	1226	1062	915	1139
	2000	72	1340	1158	995	848	1084
	3000	72	1269	1089	928	782	1029
	4000	71	1199	1020	861	717	973
	5000	71	1129	952	794	651	918
	6000	71	1059	884	727	585	863
	7000	71	990	815	660	520	808
930	S.L.	72	1787	1578	1391	1223	1463
	1000	72	1707	1500	1315	1148	1401
	2000	71	1628	1422	1239	1074	1339
	3000	71	1549	1345	1163	999	1277
	4000	71	1470	1268	1087	925	1215
	5000	71	1391	1190	1012	851	1153
	6000	71	1312	1113	936	777	1090
	7000	70	1233	1036	861	703	1028

12. ONE-ENGINE RATE OF CLIMB AT V_{YSE}

Power Setting: Maximum Continuous Power (operative engine) propeller feathered (inoperative engine) Flaps: Up Landing Gear: Up							
Weight [kg]	Pressure Altitude [ft]	Climb Speed V_{YSE} [KIAS]	Rate of Climb [ft/min]				
			Temperature [°C]				ISA
			-25	0	25	50	
1230	S.L.	84	330	230	142	62	176
	1000	83	292	193	106	26	147
	2000	82	254	157	69	-9	117
	3000	81	216	120	33	-44	87
	4000	80	179	83	-3	-80	58
	5000	79	141	46	-38	-115	28
	6000	79	104	10	-74	-150	-1
	7000	78	67	-27	-110	-185	-31
1080	S.L.	80	436	330	235	149	271
	1000	80	396	290	196	111	240
	2000	79	355	251	157	73	208
	3000	79	315	211	118	35	176
	4000	79	275	172	80	-3	145
	5000	79	234	132	41	-41	113
	6000	78	194	93	3	-78	81
	7000	78	154	54	-35	-116	50
930	S.L.	79	574	455	349	253	390
	1000	79	529	411	305	211	355
	2000	79	483	367	262	168	319
	3000	78	438	322	219	126	284
	4000	78	393	278	176	83	248
	5000	78	348	235	133	41	213
	6000	78	304	191	90	-1	178
	7000	77	259	147	47	-43	142

13. ONE-ENGINE RATE OF CLIMB AT V_{XSE}

Power Setting: Maximum Continuous Power (operative engine) propeller feathered (inoperative engine) Flaps: Up Landing Gear: Up							
Weight [kg]	Pressure Altitude [ft]	Climb Speed V_{XSE} [KIAS]	Rate of Climb at V_{XSE} [ft/min]				
			Temperature [°C]				ISA
			-25	0	25	50	
1230	S.L.	83	325	227	140	61	174
	1000	82	288	191	104	26	145
	2000	81	251	155	69	-9	116
	3000	81	214	118	33	-44	86
	4000	80	177	82	-2	-78	57
	5000	79	140	46	-38	-113	28
	6000	78	103	10	-73	-148	-1
	7000	77	66	-26	-108	-183	-30
1080	S.L.	79	424	321	229	147	265
	1000	79	385	283	192	110	234
	2000	79	346	245	155	73	204
	3000	79	307	207	117	37	173
	4000	79	268	169	80	0	143
	5000	78	229	131	43	-36	112
	6000	78	190	93	6	-73	81
	7000	78	152	55	-31	-109	51
930	S.L.	78	556	442	341	249	380
	1000	78	513	400	299	209	346
	2000	78	469	358	258	168	312
	3000	78	426	316	217	128	279
	4000	78	383	274	176	87	245
	5000	78	340	232	134	47	211
	6000	77	298	190	93	7	177
	7000	77	255	148	52	-34	143

14. CRUISE PERFORMANCES

Weight: 1150 kg (2535 lb)

Pressure Altitude: 0 ft

RPM *	MAP [inHg]	ISA – 30°C (-15°C)			ISA (15°C)			ISA + 30°C (45°C)		
		PWR	KTAS	F.C. ** [lt/hr]	PWR	KTAS	F.C. ** [lt/hr]	PWR	KTAS	F.C. ** [lt/hr]
2250	29.5	103%	143	28.6	97%	145	27.1	92%	146	25.8
2250	28	88%	134	24.5	83%	136	23.2	79%	138	22
2250	26	69%	122	19.2	65%	124	18.2	62%	125	17.3
2250	24	59%	115	16.6	56%	116	15.7	53%	117	14.9
2250	22	46%	103	12.8	43%	103	12.1	41%	103	11.5
2250	20	39%	96	11	37%	95	10.4	35%	94	9.9
2100	28	84%	132	23.5	80%	134	22.2	76%	135	21.1
2100	26	66%	121	18.5	63%	122	17.5	60%	123	16.7
2100	24	57%	114	16	54%	114	15.1	52%	115	14.4
2100	22	43%	100	12.1	41%	100	11.5	39%	100	10.9
2100	20	37%	92	10.2	35%	91	9.7	33%	89	9.2
1900	26	61%	117	17.1	58%	118	16.2	55%	119	15.4
1900	24	53%	110	14.9	50%	111	14.1	48%	111	13.4
1900	22	41%	97	11.4	39%	97	10.8	37%	96	10.2
1900	20	35%	89	9.6	33%	88	9.1	31%	85	8.7

* Propeller RPM

** Fuel Consumption for each Engine

Weight: 1150 kg (2535 lb)**Pressure Altitude: 3000 ft**

RPM *	MAP [inHg]	ISA – 30°C (-21°C)			ISA (9°C)			ISA + 30°C (39°C)		
		PWR	KTAS	F.C. ** [lt/hr]	PWR	TCAS	F.C. ** [lt/hr]	PWR	KTAS	F.C. ** [lt/hr]
2388	26.4	92%	141	25.7	87%	143	24.3	83%	144	23.1
2250	26.4	89%	139	25	85%	141	23.6	80%	143	22.4
2250	26	85%	137	23.9	81%	138	22.6	77%	140	21.5
2250	24	72%	128	20	68%	129	18.9	64%	130	18
2250	22	57%	116	16	54%	117	15.1	51%	118	14.3
2250	20	48%	108	13.4	45%	108	12.7	43%	108	12.1
2100	26.4	85%	137	23.9	81%	138	22.6	77%	140	21.4
2100	26	82%	134	22.8	77%	136	21.6	73%	137	20.5
2100	24	69%	125	19.2	65%	127	18.1	62%	128	17.2
2100	22	54%	114	15.2	51%	114	14.3	49%	115	13.6
2100	20	45%	104	12.6	43%	104	11.9	41%	104	11.3
1900	26.4	78%	132	21.9	74%	134	20.7	70%	135	19.6
1900	26	75%	130	20.9	71%	131	19.8	67%	132	18.8
1900	24	63%	121	17.7	60%	122	16.7	57%	123	15.9
1900	22	50%	110	14.1	48%	110	13.3	45%	110	12.6
1900	20	42%	101	11.7	40%	101	11.1	38%	100	10.6

* Propeller RPM

** Fuel Consumption for each Engine

Weight: 1150 kg (2535 lb)**Pressure Altitude: 6000 ft**

RPM *	MAP [inHg]	ISA – 30°C (-27°C)			ISA (3°C)			ISA + 30°C (33°C)		
		PWR	KTAS	F.C. ** [lt/hr]	PWR	KTAS	F.C. ** [lt/hr]	PWR	KTAS	F.C. ** [lt/hr]
2388	23.6	83%	139	23.3	79%	141	22	75%	142	20.9
2250	23.6	81%	138	22.6	76%	139	21.4	73%	141	20.3
2250	22	68%	129	19.1	65%	130	18.1	61%	131	17.2
2250	20	57%	119	15.8	54%	120	14.9	51%	120	14.2
2250	18	46%	108	12.9	44%	108	12.2	41%	107	11.6
2100	23.6	77%	135	21.6	73%	137	20.4	69%	138	19.4
2100	22	65%	126	18.2	62%	127	17.2	59%	128	16.4
2100	20	54%	116	15	51%	116	14.1	48%	117	13.4
2100	18	44%	106	12.4	42%	106	11.7	40%	105	11.1
1900	23.6	71%	130	19.8	67%	132	18.7	64%	133	17.8
1900	22	60%	122	16.8	57%	123	15.8	54%	123	15
1900	20	50%	112	13.9	47%	112	13.1	44%	112	12.4
1900	18	41%	102	11.6	39%	102	10.9	37%	100	10.4

* Propeller RPM

** Fuel Consumption for each Engine

Section 5 - Performances

CRUISE PERFORMANCES

Weight: 1150 kg (2535 lb) Pressure Altitude: 9000 ft										
RPM *	MAP [inHg]	ISA – 30°C (-33°C)			ISA (-3°C)			ISA + 30°C (27°C)		
		PWR	KTAS	F.C. ** [lt/hr]	PWR	KTAS	F.C. ** [lt/hr]	PWR	KTAS	F.C. ** [lt/hr]
2388	21.1	75%	137	20.9	71%	139	19.7	67%	140	18.7
2250	21.1	73%	136	20.3	69%	137	19.2	65%	138	18.2
2250	20	65%	130	18.3	62%	131	17.2	58%	131	16.3
2250	18	53%	118	14.9	50%	119	14	48%	118	13.3
2100	21.1	69%	133	19.4	65%	134	18.3	62%	135	17.4
2100	20	62%	127	17.4	59%	128	16.4	56%	128	15.6
2100	18	51%	116	14.2	48%	116	13.4	46%	116	12.7
1900	21.1	64%	128	17.8	60%	129	16.8	57%	130	15.9
1900	20	57%	122	16	54%	123	15.1	51%	123	14.3
1900	18	47%	112	13.2	44%	112	12.4	42%	111	11.8
* Propeller RPM										
** Fuel Consumption for each Engine										

Weight: 1150 kg (2535 lb) Pressure Altitude: 12000 ft										
RPM *	MAP [inHg]	ISA – 30°C (-39°C)			ISA (-9°C)			ISA + 30°C (21°C)		
		PWR	KTAS	F.C. ** [lt/hr]	PWR	KTAS	F.C. ** [lt/hr]	PWR	KTAS	F.C. ** [lt/hr]
2388	18.8	67%	135	18.8	63%	136	17.7	60%	136	16.7
2250	18.8	65%	133	18.2	61%	134	17.2	58%	134	16.3
2250	18	60%	129	16.8	57%	129	15.9	54%	129	15
2100	18.8	62%	130	17.4	59%	131	16.4	56%	132	15.5
2100	18	58%	126	16.1	54%	126	15.2	51%	126	14.4
1900	18.8	57%	125	15.9	54%	126	15	51%	126	14.2
1900	18	53%	121	14.8	50%	121	13.9	47%	121	13.2
* Propeller RPM										
** Fuel Consumption for each Engine										

15. LANDING PERFORMANCES

Weight = 1230 kg (2712 lb) Flaps: LAND Short Final Approach Speed = 70 KIAS Throttle Levers: Idle Runway: Grass						
Corrections Headwind: - 5m for each kt (16 ft/kt) Tailwind: + 11m for each kt (36ft/kt) Paved Runway: - 2% to Ground Roll Runway slope: - 2.5% to Ground Roll for each +1%						
Pressure Altitude [ft]		Distance [m]				
		Temperature [°C]				ISA
		-25	0	25	50	
S.L.	Ground Roll	199	219	239	259	231
	At 50 ft AGL	308	334	359	384	349
1000	Ground Roll	206	227	248	269	238
	At 50 ft AGL	318	344	370	396	358
2000	Ground Roll	214	236	257	279	245
	At 50 ft AGL	328	355	382	408	367
3000	Ground Roll	222	244	267	289	252
	At 50 ft AGL	348	377	406	434	385
4000	Ground Roll	230	254	277	300	260
	At 50 ft AGL	348	377	406	434	385
5000	Ground Roll	239	263	287	311	268
	At 50 ft AGL	359	389	419	448	395
6000	Ground Roll	248	273	298	323	276
	At 50 ft AGL	371	402	432	463	405
7000	Ground Roll	258	284	310	336	285
	At 50 ft AGL	382	415	446	478	416
8000	Ground Roll	268	295	322	349	294
	At 50 ft AGL	395	428	461	494	427
9000	Ground Roll	278	306	334	362	303
	At 50 ft AGL	408	442	476	510	438
10000	Ground Roll	289	318	348	377	313
	At 50 ft AGL	421	457	492	527	450

Weight = 1080 kg (2381 lb)**Flaps:** *LAND***Short Final Approach Speed =** *70 KIAS***Throttle Levers:** *Idle***Runway:** *Grass***Corrections****Headwind:** - 5m for each kt (*16 ft/kt*)**Tailwind:** + 11m for each kt (*36ft/kt*)**Paved Runway:** - 2% to Ground Roll**Runway slope:** - 2.5% to Ground Roll for each +1%

Pressure Altitude [ft]		Distance [m]				
		Temperature [°C]				ISA
		-25	0	25	50	
S.L.	Ground Roll	175	192	210	227	203
	At 50 ft AGL	271	293	315	337	306
1000	Ground Roll	181	199	218	236	209
	At 50 ft AGL	279	302	325	348	314
2000	Ground Roll	188	207	226	245	215
	At 50 ft AGL	288	311	335	358	322
3000	Ground Roll	195	215	234	254	222
	At 50 ft AGL	306	331	356	381	338
4000	Ground Roll	202	223	243	263	228
	At 50 ft AGL	306	331	356	381	338
5000	Ground Roll	210	231	252	273	235
	At 50 ft AGL	315	342	368	394	347
6000	Ground Roll	218	240	262	284	243
	At 50 ft AGL	325	353	380	406	356
7000	Ground Roll	226	249	272	295	250
	At 50 ft AGL	336	364	392	420	365
8000	Ground Roll	235	259	283	306	258
	At 50 ft AGL	347	376	405	434	375
9000	Ground Roll	244	269	294	318	266
	At 50 ft AGL	358	388	418	448	385
10000	Ground Roll	254	280	305	331	275
	At 50 ft AGL	370	401	432	463	395

Section 5 - Performances**LANDING PERFORMANCES**

Weight = 930 kg (2051 lb)**Flaps: LAND****Short Final Approach Speed = 70 KIAS****Throttle Levers: Idle****Runway: Grass****Corrections****Headwind:** - 5m for each kt (16 ft/kt)**Tailwind:** + 11m for each kt (36ft/kt)**Paved Runway:** - 2% to Ground Roll**Runway slope:** - 2.5% to Ground Roll for each +1%

Pressure Altitude [ft]		Distance [m]				
		Temperature [°C]				ISA
		-25	0	25	50	
S.L.	Ground Roll	150	166	181	196	175
	At 50 ft AGL	233	252	271	290	264
1000	Ground Roll	156	172	187	203	180
	At 50 ft AGL	240	260	280	299	270
2000	Ground Roll	162	178	194	211	185
	At 50 ft AGL	248	268	288	309	277
3000	Ground Roll	168	185	202	219	191
	At 50 ft AGL	263	285	307	328	291
4000	Ground Roll	174	192	209	227	197
	At 50 ft AGL	263	285	307	328	291
5000	Ground Roll	181	199	217	235	203
	At 50 ft AGL	272	294	317	339	299
6000	Ground Roll	188	207	226	244	209
	At 50 ft AGL	280	304	327	350	307
7000	Ground Roll	195	215	234	254	215
	At 50 ft AGL	289	313	338	361	315
8000	Ground Roll	203	223	243	264	222
	At 50 ft AGL	299	324	349	373	323
9000	Ground Roll	210	232	253	274	229
	At 50 ft AGL	308	334	360	386	331
10000	Ground Roll	219	241	263	285	237
	At 50 ft AGL	319	346	372	399	340

Section 5 - Performances**LANDING PERFORMANCES**

16. BALKED LANDING CLIMB GRADIENT

Flight conditions (ISA and SL):

Weight:	<i>1230 kg (2712 lb)</i>
Throttle levers	<i>Both FULL FORWARD</i>
Flaps	<i>T/O</i>
Landing gear	<i>DOWN</i>
Weight	<i>MTOW 1230kg (2712 lb)</i>
Speed	<i>72 KIAS</i>
Climb gradient	<i>9.4% (5.4°)</i>

17. NOISE DATA

Noise level, determined in accordance with ICAO/Annex 16 4th Ed., July 2005, Vol. I°, Chapter 10, is **72.82** dB(A).

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SECTION 6 – WEIGHT and BALANCE

INDEX

1. INTRODUCTION	3
2. WEIGHING PROCEDURES	4
2.1. Preparation	4
2.2. Levelling	4
2.3. Weighing	4
2.4. Determination of C.G. location	4
2.5. Weighing record.....	5
2.6. Weighing record (II).....	5
3. WEIGHTS AND C.G.....	7
4. BAGGAGE LOADING	8
5. EQUIPMENT LIST	10

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1. INTRODUCTION

This section describes the procedure for establishing the basic empty weight and the moment of the aircraft. Loading procedure information is also provided.

NOTE

Aircraft must be operated in accordance with the limits concerning the maximum takeoff weight and CG excursion as reported in Flight Manual Section 2.

Pilot is responsible for checking the weight and CG excursion are compliant with the related limits. CG excursion and weight limits are reported in Section 2 – Limitations.

2. WEIGHING PROCEDURES

2.1. PREPARATION

- Carry out weighing procedure inside closed hangar
- Remove from cabin any object unintentionally left
- Make sure Flight Manual and mandatory documents are on board
- Align nose wheel
- Drain fuel via the specific drain valve
- Oil, hydraulic fluid and coolant liquid at the operating levels
- Move sliding seats to most forward position
- Raise flaps to fully retracted position
- Place control surfaces in neutral position
- Place scales (min. capacity 300 kg) under each wheel

2.2. LEVELLING

- Level the aircraft (the reference for longitudinal levelling is made putting a spirit-level on the cabin floor as shown in the Aircraft Maintenance Manual).
- Adjust longitudinal attitude deflating nose tire

2.3. WEIGHING

- Record weight shown on each scale
- Repeat weighing procedure three times
- Calculate empty weight

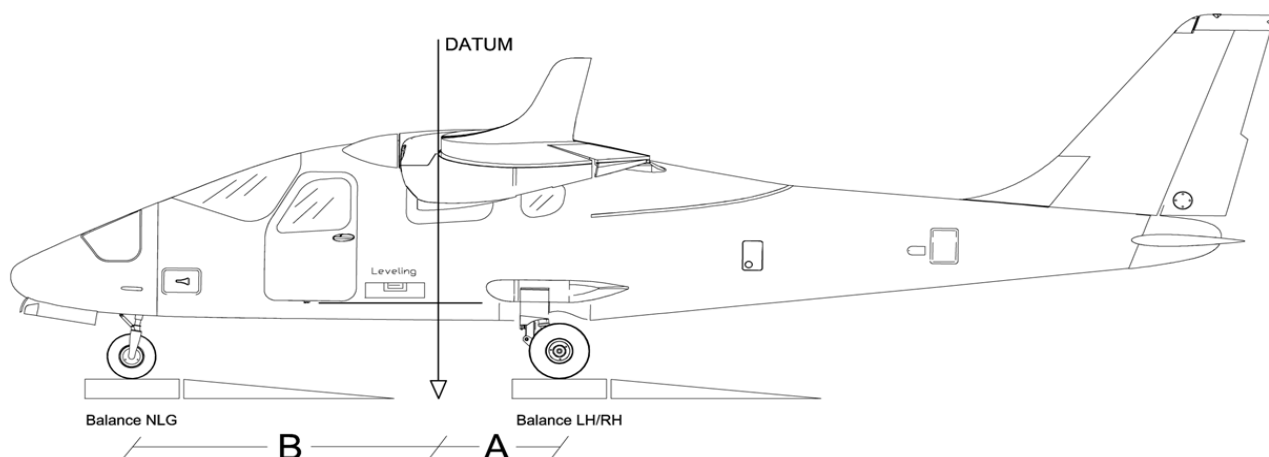
2.4. DETERMINATION OF C.G. LOCATION

- Drop a plumb bob tangent to the wing leading edge and trace a reference mark on the floor (see Figure on Para. 2.5 or 2.6)
- Repeat the operation for other wing
- Stretch a taught line between the two marks
- Measure the distance between the reference line and both main and nose wheel axis (A and B distances respectively)
- Using recorded data it is possible to determine the aircraft C.G. location and the aircraft moment (see following table)

2.5. WEIGHING RECORD

Model **P2006T** S/N: _____ Weighing no. _____ Date: _____

Datum: leading edge vertical



	<i>Kg or Lbs</i>		<i>Meters or feet</i>
Nose wheel weight	$W_1 =$	Plumb bob distance LH wheel	$A_L =$
LH wheel weight	$W_L =$	Plumb bob distance RH wheel	$A_R =$
RH wheel weight	$W_R =$	Average distance $(A_L + A_R)/2$	$A =$
$W_2 = W_L + W_R =$		Plumb bob distance from nose wheel	$B =$

Empty weight $W_e = W_1 + W_2 =$ [kg] or [lbs]

$$D = \frac{W_2 \cdot A - W_1 \cdot B}{W_e} = \text{[m] or [Ft]} \quad D\% = \frac{D}{1.339} \cdot 100 =$$

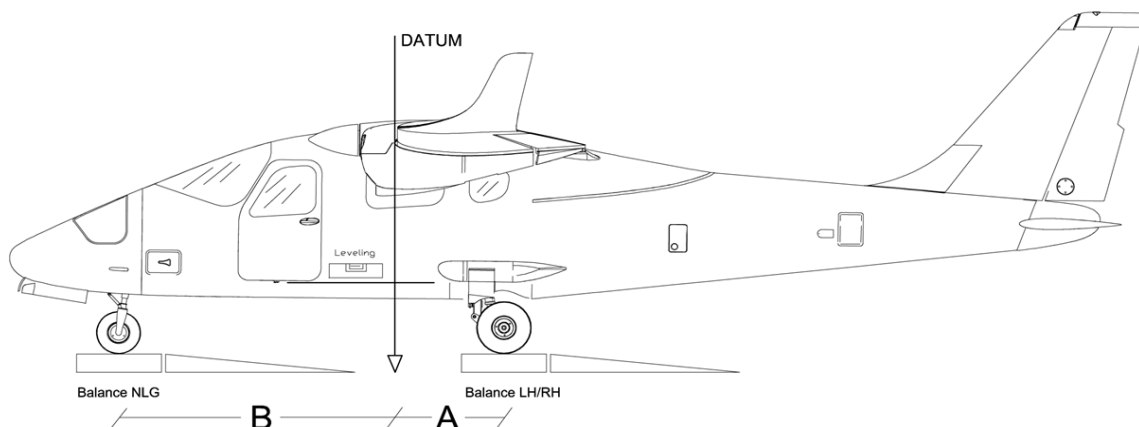
Empty weight moment: $M = (D \cdot W_e) =$ [m · Kg] or [Ft · Lbs]

Maximum takeoff weight	$W_T =$	[kg] or [lbs]	Signature _____
Empty weight	$W_e =$	[kg] or [lbs]	
Max. useful load $W_T - W_e$	$W_u =$	[kg] or [lbs]	

2.6. WEIGHING RECORD (II)

Model **P2006T** S/N: _____ Weighing no. _____ Date: _____

Datum: leading edge vertical



	<i>Kg or Lbs</i>		<i>Meters or feet</i>
Nose wheel weight	$W_1 =$	Plumb bob distance LH wheel	$A_L =$
LH wheel weight	$W_L =$	Plumb bob distance RH wheel	$A_R =$
RH wheel weight	$W_R =$	Average distance $(A_L + A_R)/2$	$A =$
$W_2 = W_L + W_R =$		Plumb bob distance from nose wheel	$B =$

Empty weight $W_e = W_1 + W_2 =$ [kg] or [lbs]

$$D = \frac{W_2 \cdot A - W_1 \cdot B}{W_e} = \quad [m] \text{ or } [Ft] \quad D\% = \frac{D}{1.339} \cdot 100 =$$

Empty weight moment: $M = (D \cdot W_e) =$ [m · Kg] or [Ft · Lbs]

Maximum takeoff weight	$W_T =$	[kg] or [lbs]	Signature _____
Empty weight	$W_e =$	[kg] or [lbs]	
Max. useful load $W_T - W_e$	$W_u =$	[kg] or [lbs]	

3. WEIGHTS AND C.G.

C.G. position can be defined by means of the chart below.

The pilot is responsible for ensuring the correct useful load loading.

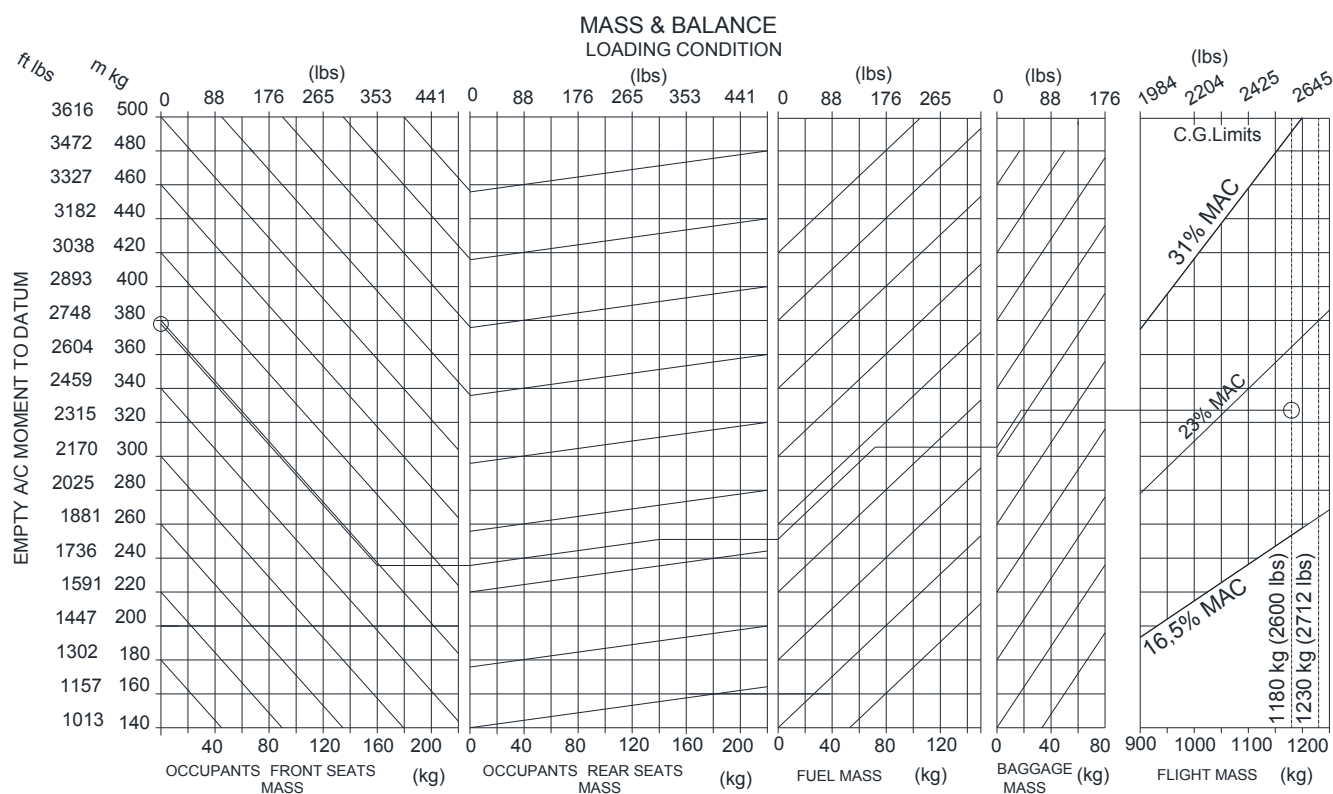


Figure 1

Example

A/C empty mass moment	378 kgm
A/C empty mass	790 kg
Occ. front seats	160 kg
Occ. rear seats	140 kg
Fuel	72kg
Baggage	18 kg
A/C T.O. weight	1180kg