

LOAD DATA SHEET

DA 735

Organisation :	TECNAM AUSTRALIA		
Aircraft Type :	P2008	VH- MSF	Serial No. 6
Approved Loading System :	IAW Manufacturer's Approved Pilot Operating Handbook / Flight Manual & Supplements		

TECNAM AUSTRALIA

Authorised	Date	Date of Expiry	Issue
S. WHITEHEAD AQ 35	18/11/10	indef	1

Empty Aircraft Weight and Balance

Item	Weight(kg)	Arm(mm)	Index Units	Configuration
Empty weight	368.8	1859.7	685839	

Remarks

EMPTY : Unusable Fuel and Full Oil.

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D= 292.6mm
D%=21.3%

APPROVED
SIGNED 
DATED 18/11/10
S. WHITEHEAD
PO BOX 789
BIGGERA WATERS
QLD. 4216
0418758736

3.3 Weight and Balance

In order to compute the weight and balance of this aircraft, we have provided the following loading charts. This will reduce the amount of math you need. To compute weight and balance use the formula:

$$\text{Weight} * \text{Arm} = \text{Moment.}$$

Pilot & Passenger			
Weight (lbs)	Moment (lbs x in)	Weight (lbs)	Moment (lbs x in)
10	748	260	19448
20	1496	270	20196
30	2244	280	20944
40	2992	290	21692
50	3740	300	22440
60	4488	310	23188
70	5236	320	23936
80	5984	330	24684
90	6732	340	25432
100	7480	350	26180
110	8228	360	26928
120	8976	370	27676
130	9724	380	28424
140	10472	390	29172
150	11220	400	29920
160	11968	410	30668
170	12716	420	31416
180	13464	430	32164
190	14212	440	32912
200	14960	450	33660
210	15708	460	34408
220	16456	470	35156
230	17204	480	35904
240	17952	490	36652
250	18700	500	37400

Fuel		
Gallons	Weight (lbs)	Moment
1	6,26	544
2	12,52	1089
3	18,78	1633
4	25,04	2178
5	31,3	2722
6	37,56	3267
7	43,82	3811
8	50,08	4355
9	56,34	4900
10	62,6	5444
11	68,86	5989
12	75,12	6533
13	81,38	7078
14	87,64	7622
15	93,9	8166
16	100,16	8711
17	106,42	9255
18	112,68	9800
19	118,94	10344
20	125,2	10889
21	131,46	11433
22	137,72	11978
23	143,98	12522
24	150,24	13066
25	156,5	13611
26	162,76	14155

[illegible]

	Meter	Inches
PAX	1.900	74,80
FUEL	2.209	86,97
BAGGAGE	2.417	95,16

To compute weight and balance:

1. Get moments from loading charts
2. Obtain the empty weight and moment from the most recent weight and balance
3. Insert the weights and the moments for fuel, occupants and baggage from the previous chart
4. Total the weight and the moment columns
5. Divide the total moment by the total weight to get the arm
6. Check that the total weight does not exceed maximum gross weight of 1320 pounds
7. Check that the arm falls within the C.G. range

CoG Position Computation Chart			
	Weight (lbs)	Arm (inches)*	Moment
Empty Weight			
Fuel		86.97	
Pilot & Passenger		74.80	
Baggage		95.16	
Total MOMENT			
Total WEIGHT			
Distance "D"= MOMENT/WEIGHT			

*ADD to the distance "D" the value 1567mm (62in)

C.G. Range		
Meters	1.842	2.020
Inches	72.50	79.5
Max Weight	Pounds	Kilograms
	1320.00	600.00

Example Problem			
	Weight (lbs)	Arm (inches)	Moment
Empty Weight	813,5	77,13	62741,99
Fuel	150	86,97	13045,50
Pilot & Passenger	300	74,80	22440,00
Baggage	20	95,16	1903,20
Totals	1283,5	78,01	100130,69

In this example, the gross weight is under the max gross weight of 1320 pounds and the Arm or C.G. is within the C.G. range listed above.

3.3.1 Loading

Baggage compartment is designed for a maximum load of 44 pounds. Baggage size shall prevent excessive loading of utility shelf (maximum pressure 12.5 kg/dm²). Maximum baggage size is: 80x45x32 cm . Baggage shall be secured using a tie-down net to prevent any baggage movement during maneuvers.

4.6 Takeoff Performance

TAKEOFF DISTANCE

Conditions:

Flaps: 15°	Runway: dry, compact, grass
Engine: full throttle	Slope: 0° Wind: zero
V _r = 48 KIAS [44KCAS]	V _{LO} = 50 KIAS [45KCAS]
V _x flaps 15 = 63 KIAS [62KCAS]	R/C ≥ 200 ft/min

Decrease distances by 10% for each 10 Knots of headwind. Increase distances by 20 % for each 10 Knots of tailwind
For dry and paved runway operation decrease ground run by 6 %.

⇒ Example:

Given	Find
O.A.T. = 15°C	TOD = 170m (557 ft)
Pressure altitude = 2900 ft	TOR = 355m (1164 ft)
Weight = 500 Kg	

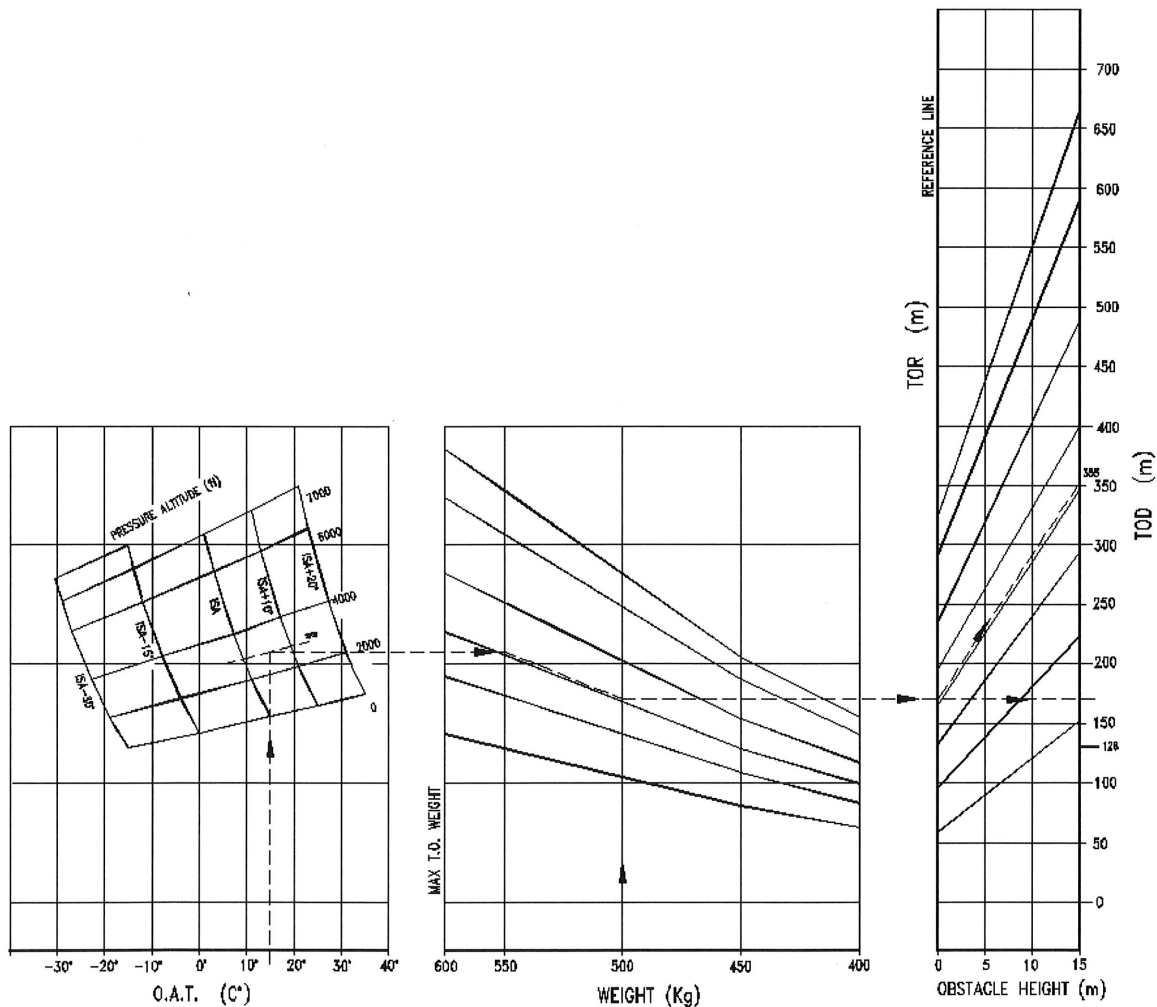


Fig. 4-4 Takeoff performance

4.7 Landing Distance

CONDITIONS:

Maximum weight = 600 kg (1320 lbs)

Brakes: maximum braking

Slope: 0°

Conditions: ISA

Engine: throttle idle

Runway: dry, compact grass

Wind: zero

Flaps: 35°

NOTE

Decrease distances by 10% for each 10 Knots of headwind. Increase distances by 20 % for each 10 Knots of tailwind;

For dry and paved runway operation increase ground run by 10%

If it becomes necessary to land without flap extension (flap malfunction), increase approach speed by 10 Knots, increase by landing distance by 40% distance pertaining to flap setting at 35° and increase Vx to 58 KIAS [57KCAS]

Vx 15 flaps (speed over obstacle) is 48 KIAS [47KCAS]

Hp (ft)	0	1000	2000	3000	4000	5000	6000	7000
GR (m)	115	118	122	125	129	133	137	141
GR (ft)	377	387	400	409	422	446	448	463
LD (m)	285	294	299	304	308	314	321	324
LD (ft)	915	966	981	996	1011	1029	1052	1064

HP = pressure altitude

GR = ground run

LD = 50' obstacle